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A Study of Board Remuneration Committees : Structure and Effectiveness

Kercher, Kim-Lee

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A Study of Board Remuneration Committees: Structure and Effectiveness

Presented By

Kim-Lee Kercher

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ABSTRACT

This thesis examines the structure and effectiveness of board remuneration committees. The study provides evidence on factors that determine the voluntary adoption of corporate governance recommendations regarding remuneration committees in 2008. The findings indicate that remuneration committee existence is significantly associated with insider share ownership, institutional shareholding and marginally associated with change in CEO. Composition of the committee is significantly explained by independent directors and marginally explained by company complexity measured by geographical segments.

The results suggest that agency costs and board capacity are incrementally relevant to adoption of the ASX remuneration committee recommendations, after controlling for company characteristics related to company size, governance quality, the appointment of a big 4 auditor and leverage. The results also indicate that companies are less likely to adopt the ASX remuneration committee recommendations in response to shareholder dissent on the annual remuneration report.

The analysis then considers the association between adoption of the ASX remuneration committee recommendations and executive remuneration. Contrary to theoretical predications, the results infer that adoption of the ASX remuneration committee recommendations does not universally lead to more effective remuneration practices. Particularly, adoption of the ASX remuneration committee recommendations is associated in some cases with excessive levels of remuneration of the top five ranked executives and does not generally result in a stronger alignment between executives' remuneration and measures of company performance.

The results suggest that the association between adoption of the ASX remuneration committee recommendations and executive remuneration varies depending on whether the company is experiencing positive or negative return on assets. In companies with positive return on assets, adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration and weaker pay for performance sensitivity in remuneration awarded to the top five ranked executives. Adoption of the ASX remuneration committee recommendations is not significantly associated with either remuneration levels or pay for performance sensitivity in companies with negative return on assets.

Shareholder voting behaviour in relation to the annual remuneration report is also examined as a measure of remuneration committee efficacy. Adoption of the ASX remuneration committee recommendations is not associated with shareholder dissent on the annual remuneration report. Company characteristics other than executive remuneration and its oversight are associated with shareholder dissent.

The study demonstrates that effectiveness of adoption of the ASX remuneration committee recommendations varies cross-sectionally depending on company characteristics. Policy implications from this research suggest that rather than focusing solely on independence as a key indicator of remuneration committee quality, the focus should also be on ensuring the quality of the remuneration committee. That is, ensuring that the board members appointed to the committee have the appropriate skills and expertise to provide effective oversight of the executive remuneration function. Independence in itself does not appear to be the optimal solution to curtailing inappropriate executive remuneration practice in Australian listed companies.

Declaration

This thesis is submitted to Bond University in fulfilment of the requirements of the degree of Doctor of Philosophy. This thesis represents my own original work towards this research degree and contains no material which has been previously submitted for a degree or diploma at this University or any other institution, except where due acknowledgement is made.

Kim-Lee Kercher

Faculty of Business, Bond University

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For Glen, Brian and Sheri

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1. INTRODUCTION

1.1 BACKGROUND

This thesis is concerned with the regulation of corporate executive remuneration in Australia. As is the case in most developed economies, Australia has progressively implemented substantial regulation of corporate executive remuneration. The key regulatory mechanisms are the *Corporations Act 2001* (Cth) and, for listed companies, the listing rules of the Australian Securities Exchange Limited ("ASX"). Additionally, the Australian Securities Exchange Corporate Governance Council has released Corporate Governance Principles and Recommendations (hereafter referred to as "ASX Recommendations"). These guidelines are largely voluntary and seek to outline good governance practices. Regulatory intervention in this area of corporate governance has largely been a response to public dissatisfaction with what is perceived as excessive executive remuneration, particularly in circumstances where company performance has been poor. Despite the substantial regulatory initiatives to date, concerns continue to be raised about the effectiveness of existing regulation (Windsor and Cybinski, 2009; Bebchuk and Weisbach, 2010; Australian Productivity Commission, 2010).

For listed companies, governance of executive remuneration is overseen by the board of directors. In some cases the board is assisted by its remuneration sub-committee. The ASX recommends that listed companies form a remuneration committee to promote fair and responsible remuneration practice (ASX Corporate Governance Council, 2007, p. 35). In addition, the ASX recommends the composition of the committee be of adequate size and sufficient independence. The guidelines in the ASX Recommendations suggest that the remuneration committee should consist of at least three members, the majority of which should be independent and that it should

have an independent chairperson appointed (ASX Corporate Governance Council, 2007, Principle 8), (hereafter referred to as the "ASX remuneration committee recommendations"). A suitably structured committee monitors executive remuneration and provides advice to the board on executive remuneration practice. Adoption of the ASX remuneration committee recommendations prior to 2011 is voluntary and subject to a *comply or explain* disclosure regime. This means listed companies are required to disclose in their annual report the extent to which they adopt the ASX Recommendations and to provide an explanation when the ASX Recommendations are not followed (ASX Listing Rule 4.10.3).

Regulation was introduced in 2011 which requires companies included in the S&P ASX 300 index (hereafter referred to as "ASX 300 Index") to form a remuneration committee consisting solely of non-executive directors (ASX Listing Rule 12.8). The formation and composition of remuneration committees for companies outside the ASX 300 Index remains voluntary and subject to the *comply or explain* regime. This thesis examines factors associated with remuneration committee formation and composition by Australian companies prior to the implementation of the mandatory formation and composition rules in 2011. Consequently, the focus of this thesis is on governance choice in a voluntary setting.

Despite the important role of the remuneration committee in the governance of executive remuneration, research into its operation in Australia has been limited. The majority of prior theoretical and empirical studies have been conducted in the United States (hereafter referred to as "US") (Guest, 2008; Sapp, 2008). Because US regulation mandates the formation and structure of the remuneration committee, related prior research has limited application to Australia, a voluntary compliance setting. This thesis

adds to the limited Australian research by conducting a comprehensive examination of the role of the remuneration committee in managing executive remuneration practice. Analyses are presented that consider: (1) the incentives for a company to voluntarily form a remuneration committee; (2) the incentives to adopt the ASX remuneration committee recommendations regarding committee composition; and (3) how adoption of the ASX remuneration committee recommendations influences executive remuneration levels and the link between remuneration and measures of company performance.

This chapter proceeds as follows. Section 1.2 details the research questions addressed by the thesis. Section 1.3 provides the motivation for the thesis and outlines the contributions to current literature. An overview of the research methodology is included in section 1.4. Section 1.5 summarises the results of the thesis. The structure of the thesis is outlined in section 1.6.

1.2 RESEARCH PROBLEM

This thesis focuses on the ASX remuneration committee recommendations as no body of evidence exists as to whether the ASX remuneration committee recommendations are achieving their objective. The focus of the ASX remuneration committee recommendations is to ensure appropriate oversight of the executive remuneration function and to promote fair and responsible remuneration practices. The first aim of this thesis is to examine the decision that companies make regarding the formation and composition of the remuneration committee. Prior research suggests a positive relation between the need for monitoring of managers and decisions about remuneration committee formation and composition. Because of their characteristics, some companies have greater potential for agency problems related to executive

remuneration. For these companies there is an increased likelihood that contracts provide for remuneration that favours management at the expense of the company and its shareholders. This creates a greater demand for monitoring (Cui et al., 2007; Rainsbury et al., 2008). Therefore, the decision made by a company to adopt the ASX remuneration committee recommendations is expected to be positively related to agency costs and the related external demand for monitoring.

In addition, adoption of the ASX remuneration committee recommendations requires sufficient board size and diversity. Constraints arise when there is a limited supply of potential committee members (Rainsbury et al., 2008). Moreover, it is costly for a company to appoint additional board members or reconfigure the board so as to enable adoption of the remuneration committee recommendations (Link et al., 2008). The decision regarding remuneration committee formation and composition is therefore a matter of balancing the benefits of monitoring provided by the committee and the costs of adoption of the ASX remuneration committee recommendations. The first research question focuses on formation and composition of the remuneration committee.

Research Question 1a: Why do companies form a remuneration committee?

Research Question 1b: For companies that form a remuneration committee, what factors determine adoption of the ASX remuneration committee composition recommendations?

This thesis also examines the relation between adoption of the ASX remuneration committee recommendations and executive remuneration practice. The ASX states that "companies should ensure the level and composition of remuneration is sufficient and reasonable and that its relationship to performance is clear" (Australian Corporate

Governance Council, 2007, p. 35). The ASX remuneration committee recommendations are intended to increase the likelihood that remuneration practice meets these objectives. The second research question is therefore:

Research Question 2: Does adoption of the ASX remuneration committee recommendations influence the level of executive remuneration and the linkage to company performance in remuneration awarded to key executives?

The third research question examines whether adoption of the ASX remuneration committee recommendations is associated with levels of dissent on the annual remuneration report. If adoption of the ASX remuneration committee recommendations is associated with appropriate levels of remuneration and linkage of remuneration to company performance, then it is expected that shareholder dissent should be lower in these companies. That is, where shareholders perceive adoption of the ASX remuneration committee recommendations to be associated with more effective remuneration practice, the level of dissent on the annual remuneration report is likely to be lower. The third research question is therefore:

Research Question 3: Is adoption of the ASX remuneration committee recommendations negatively associated with shareholder dissent on the annual remuneration report?

1.3 MOTIVATION AND CONTRIBUTION

The study of remuneration committees is motivated by continued questioning of the effectiveness of existing regulation of executive remuneration by researchers and regulators (Windsor and Cybinski, 2009; Bebchuk and Weisbach, 2010; Australian Productivity Commission, 2010). Regulatory intervention has occurred partly because

of public dissatisfaction with perceived excessive executive remuneration, particularly where company performance is low. Despite these concerns, Australian research into the role of the remuneration committee in the governance of executive remuneration has been limited. This means the existing body of literature is limited in allowing assessment of the efficacy of the ASX remuneration committee recommendations in a voluntary setting. In particular, there is a lack of evidence to determine appropriate regulatory policy. For example, whether the introduction of mandated rules regarding remuneration committee formation and composition is appropriate. This thesis provides evidence relevant to these policy issues.

The study provides detailed descriptive material on the level of adoption of voluntary recommendations relating to the remuneration committee for Australian listed companies in 2008. The analysis also examines the structure of the remuneration committee consistent with the ASX remuneration committee recommendations regarding size and independence. This study contributes to the literature in a number of ways. First, the study provides detailed information about the use of remuneration committees by Australian companies. A comprehensive examination is undertaken of the factors influencing the decision to voluntarily form a remuneration committee in the Australian setting.

The majority of prior board committee studies have been concerned with the audit committee and its contribution to ensuring the integrity of financial reporting (Carson, 2002; Klein, 2003). Overall, research regarding the remuneration committee is a small portion of the prior board committee studies (Vafeas, 1999, 2000; Carson, 2002; Sun and Cahan, 2009). Previous research has examined the remuneration committee in conjunction with a range of corporate governance practices (Kang et al., 2007;

Christensen et al., 2010). Australian research on the remuneration committee is less developed than in the US and United Kingdom (hereafter referred to as "UK") (Kiel and Nicholson, 2003; Huang et al., 2009).

Second, much of prior theoretical and empirical research has been conducted in the US (Kang et al., 2007; Guest, 2008; Sapp, 2008; Bebchuk and Weisbach, 2010), where regulation mandates the formation and structure of a remuneration committee. There are substantial legal, economic and institutional differences between the Australian regulatory environment and the US (Bonn, 2004). Conducting analysis in the Australian voluntary adoption setting enriches the extant research by providing an insight as to how governance choices are made and how the choices are related to executive remuneration. The Australian environment allows us to identify incentives for adoption and structure of remuneration committees that do not include complying with regulations.

Third, the diverse sample used in this thesis provides an incremental contribution to the current literature. Prior research has focused on smaller samples of larger, more established companies (Conyon and Peck, 1998; Daily et al., 1998; Anderson and Bizjak, 2003). This issue of limited sample size is particularly the case for Australian studies. In contrast, this thesis uses a larger sample, reflecting a range of company sizes and age. Accordingly, the analysis extends to examining the structure and effectiveness of remuneration committees for different company sizes. This is an important contribution because extant research demonstrates that size is a relevant factor in governance choice (Windsor and Cybinski, 2009) and that adoption of *best practice* guidelines are not necessarily the optimal governance choice for all company sizes (Christensen et al., 2012).

Fourth, the thesis presents evidence relevant to public policy discussion. The recent Australian Productivity Commission report on executive remuneration in Australia contained a number of proposed reforms (Australian Productivity Commission, 2010). The proposals include mandatory remuneration committee formation and composition requirements for Australia's largest 300 companies. The ASX subsequently amended its listing rules, effective from 1 July 2011, to address the Australian Productivity Commission's call for the introduction of prescriptive requirements for Australia's largest 300 companies. This study provides evidence regarding whether it is efficient to allow large companies choice in the adoption of governance practices.

Fifth, a significant component of the existing research into executive remuneration focuses solely on CEO remuneration practices (Frydman and Saks, 2010). Another contribution of this research is that it examines remuneration for a wider group of executives. The remuneration committee monitors and advises the board of directors on overall remuneration practice, not only for the CEO. Additionally, the annual shareholder advisory vote is on the company's remuneration report, which incorporates disclosures regarding remuneration practices for senior executives, which incorporates the directors, CEO and other identified senior executives. Therefore, it is relevant to consider the remuneration of a broader group of senior executives in assessing the performance of the remuneration committee.

Sixth, this thesis also contributes to the existing literature in its approach to determining the appropriateness of executive remuneration. Prior studies have examined the levels of remuneration and the link between remuneration and measures of company performance. This approach is followed in this thesis; however, a novel

approach to determining the appropriateness of remuneration is adopted. In this thesis, the outcome of the non-binding shareholder vote on the annual remuneration report is used as means of measuring the appropriateness of remuneration. This non-binding shareholder vote represents an opportunity for shareholders to express their satisfaction or otherwise with company remuneration practice. By extension, the non-binding shareholder vote is an indicator of the effectiveness of the board and the remuneration committee in mitigating agency problems.

Additionally the Australian Commonwealth government in 2011 introduced new legislation which contains what is referred to as the *two strikes* rule which allows for a board spill if a company receives a negative vote from shareholders on the remuneration report of twenty five per cent or higher in two consecutive years (Corporations Amendment (Improving Accountability of Director and Executive Remuneration) Bill 2011 (Cth)). The new legislative requirement is a further enhancement of the role of shareholders regarding executive remuneration practice. This study provides insight into the role of the remuneration committee in ensuring remuneration is acceptable to shareholders.

Finally, earlier Australian studies were conducted prior to, or immediately after, the introduction of the ASX Recommendations (Australian Corporate Governance Council, 2003). Consequently the studies were conducted when the ASX Recommendations did not exist or were arguably in the early stages of implementation. These studies were conducted using samples consisting of large companies. A broader sample is needed before more generalisable conclusions can be drawn. Therefore, the sample used is drawn from a period in which the ASX Recommendations have had sufficient time to be assessed and embedded in corporate governance practice.

1.4 RESEARCH METHOD

Hypotheses are developed to address each of the research questions outlined above. The research method is empirical analysis of archival data for Australian listed companies in 2008. Archival data is obtained from financial databases, company annual reports and annual general meeting proxy voting disclosures. Statistical analyses are performed of logistic and ordinary least squares multivariate regressions.

1.5 RESULTS

Remuneration committee existence is significantly associated with shareholder characteristics related to insider shareholdings and institutional shareholding, and marginally related to a change in CEO. Composition of the committee is significantly explained by the availability of independent directors and marginally explained by company complexity measured by geographical segments. Whilst agency costs are associated with committee formation, adoption of the ASX remuneration committee composition recommendations is associated with board capacity.

The findings also suggest that adoption of the ASX remuneration committee recommendations is not universally associated with more effective remuneration practice with regard to the top five ranked executives. Adoption of the ASX remuneration committee recommendation is generally associated with higher remuneration levels, and is not generally associated with remuneration contracts that provide stronger links between remuneration and measures of company performance.

The association between executive remuneration and adoption of the ASX remuneration committee recommendations varies depending on whether the company is experiencing positive or negative return on assets. The results indicate that adoption of the ASX remuneration committee recommendations are associated with higher

remuneration levels in companies evidencing positive operating performance, measured by return on assets. For companies with negative operating performance, no significant association between remuneration and adoption of the ASX remuneration committee recommendations is found. Additionally, for companies with positive return on assets, adoption of the ASX remuneration committee recommendations is associated with weaker pay for performance sensitivity. No association between adoption of the ASX remuneration committee recommendations and operating performance was found in companies with negative return on assets.

The results also indicate that in some cases adoption of the ASX remuneration committee recommendations is associated with excessive levels of executive remuneration. However, for companies identified as paying excessive levels of remuneration to the top five ranked executives, adoption of the ASX remuneration committee recommendations is associated with stronger linkage between remuneration and measures of company performance.

Analysis of the sample companies partitioned into large, mid-size and small sub samples, suggests that adoption of the ASX remuneration committee recommendations is not associated with more effective remuneration practices in large and mid-size companies. However, adoption of the ASX remuneration committee recommendations is associated with a stronger link between measures of company performance and the remuneration of the top five ranked executives in small companies.

The analysis of shareholder dissent on the annual remuneration report shows that adoption of the ASX remuneration committee recommendations is generally not associated with levels of shareholder dissent. However, for companies identified as paying excessive levels of remuneration to the top five ranked executives, adoption of

the ASX remuneration committee recommendations is associated with lower levels of shareholder dissent on the annual remuneration report.

Overall the findings indicate that agency costs and board capacity are incrementally relevant to the decision to voluntarily adopt the ASX remuneration committee recommendations, after controlling for company characteristics related to size, debt levels, overall governance quality, auditor and company age. Additionally, the analysis of remuneration committee efficacy suggests that adoption of the ASX remuneration committee recommendations is not universally associated with more effective executive remuneration practice. Only limited support is found regarding the proposition that adoption of the ASX remuneration committee recommendations ensures the company implements remuneration arrangements associated with measures of company performance adopted in this study.

1.6 STRUCTURE

The thesis is structured as follows. Chapter 2 provides an overview of governance practices related to executive remuneration. This includes Australia, the US and the UK because the regulatory initiatives in these countries are similar and have to some extent influence regulation in Australia. Chapter 3 presents the theoretical framework on which the thesis is based and provides a comprehensive review of the literature related to the research questions. Following on from Chapter 3, testable hypotheses are developed and outlined in Chapter 4. Chapter 5 outlines the research method adopted and provides a summary of the variables used in the statistical modelling used in the study.

Chapter 6 reports the results of analyses conducted in regard to remuneration committee formation and composition. Chapter 7 presents the results of analyses

conducted to assess remuneration committee effectiveness. The results presented include descriptive statistics of the sample regarding remuneration committee formation, composition and effectiveness. Statistical analyses include (1) logistic regression models employed to identify factors relevant to remuneration committee formation and composition and (2) ordinary least squares multiple regressions employed to test various aspects of remuneration committee efficacy. Chapter 8 discusses the results of the study and their implications, outlines limitations and recommendations for future research, and concludes this thesis.

2. INSTITUTIONAL BACKGROUND

2.1 INTRODUCTION

This chapter discusses the development of regulation of executive remuneration oversight and practice in Australia. It is informative to review US and UK regulatory developments because of the influence they have had on Australian regulation (Thomas, 2009, Clarke, 2011). Australia, the US and UK are all common law countries. "A significant proportion of Australia's regulatory framework for executive [remuneration], including the introduction of the ASX [Recommendations] in 2003, and important reforms to the Corporations Act in 2004, constituted a direct response to Enron and some contemporaneous Australian corporate scandals" (Hill, 2010, p. 8). Additionally, Australia's corporate governance reform agenda has closely followed that of the UK and US (Dignam and Galanis, 2004).

This chapter proceeds as follows. Section 2.2 provides an overview of the changes in executive remuneration practice over time. The introduction and evolution of corporate governance codes of practice are discussed in section 2.3. Section 2.4 outlines regulatory intervention used to provide shareholders with greater input over executive remuneration practices. The corporate governance framework relevant to the thesis is discussed at section 2.5. The chapter is summarised in section 2.6.

2.2 THE RISE OF EQUITY BASED REMUNERATION

The complexity of arrangements for executive remuneration has increased over time. This is partially due to the shift from cash payment to more complex packages including cash and equity based remuneration. Prior to the 1980s, the components of executive remuneration were mainly salary, cash bonuses and long term cash incentives

(Frydman and Jenter, 2010). Equity based remuneration was used, but only to a limited extent. During the 1980s, US companies began more extensive use of equity based remuneration in the form of stock options (Frydman and Jenter, 2010). In a study of large US listed companies, Hall and Liebman (1998) examine the use of executive stock options. They show that in 1980, 30 per cent of the remuneration awarded to the chief executive officer (CEO) was in the form of new stock option grants, yet by 1994, the proportion had risen to 70 per cent. Moreover, the study showed that by 1994, 87 per cent of chief executives held stock options. Hall and Murphy (2003) also document a significant increase in options granted to chief executives, managers and employees in US companies during the period from 1992 to 2002.

Australia and the UK also increasingly adopted equity based remuneration arrangements around the same time (Hill and Yablon, 2002). In a study of remuneration practices of UK companies between 1980 and 1993, Conyon et al. (1995) note that despite the scarcity of detailed data on the issue of stock options during this period, the evidence suggests that the importance of stock options increased during the period. In a study of Australian companies, Coulton and Taylor (2002b) find that executive stock options have grown to form a significant component of remuneration in large Australian companies. In their review of 258 companies, 59 per cent of the sample had granted stock options to the CEO, with 31 per cent of the companies granting stock options in the sample year. The stock options granted had a median estimated value equivalent to 27 per cent of total remuneration awarded to the CEO. However, the authors note that the use of executive stock options is not as extensive in Australia, as in the US. Thomas (2011) also notes that between 2002 and 2008, 40 to 55 per cent of the largest 100 companies in Australia had issued options as part of their remuneration packages. The

stock options granted represented between 6 and 11 per cent of the total remuneration awarded to the CEO over that time period (Australian Productivity Commission, 2010).

Executive based remuneration arrangements can also be used to align the interests of shareholders and managers (Hall and Murphy, 2003; Frydman and Jenter, 2010). The increased use of equity based remuneration (particularly stock options) across these jurisdictions was motivated by favourable taxation treatment and the lack of a requirement for the related value to be reported as an expense in company financial accounts (Egginton et al., 1993; Coulton and Taylor, 2002a; Hill and Yablon, 2002; Hall and Murphy, 2003). In certain circumstances the tax liability relating to the issue of the options could be delayed and the employee taxed at a lower capital gains rate (Egginton et al., 1993). Accounting rules were enacted by the US in 2004, and in 2005 by the UK and Australia, which require expensing of option grants in the annual financial report.

In Australia, the expensing of stock options was introduced via the Australian accounting standard, AASB 2 "Share-Based Payment" (Australian Accounting Standards Board, 2010). The UK also introduced the requirement via the issue of accounting standard FRS (Financial Reporting Standard) 20 (UK Financial Reporting Council, 2012). AASB 2 and FRS 20 are the jurisdictional equivalents to the International Accounting Standard, IFRS 2 "Share-Based Payments" (Australian Accounting Standards Board, 2010; UK Financial Reporting Council, 2012). Whilst the US did not adopt the International Accounting Standards, the requirement to expense employee stock options was introduced via the US Generally Accepted Accounting Principles FAS 123R "Share-Based Payment" (Financial Accounting Standards Board, 2004). As a result, stock options became less prevalent (Frydman and Jenter, 2010).

While tax and accounting benefits have been removed or limited, there are other reasons for using options as a form of remuneration. For example, they are considered an inexpensive way in which small start-up companies could compete with larger more established companies to attract talented executives (Coulton and Taylor, 2002a; Hall and Murphy, 2003; Hill, 2010). Moreover, executive stock options and other equity based remuneration arrangements can be effectively used to align the interests of shareholders and managers (Hall and Murphy, 2003; Frydman and Jenter, 2010). Hall and Murphy (2003, p. 54) note that theoretical and empirical research in this area indicates, with few exceptions, optimal remuneration contracts include the issue of employee stock options as a means of mitigating agency costs. Frydman and Jenter (2010, p. 89) conclude that "the long run evidence shows that [remuneration] arrangements have served to tie the wealth of managers to [company] performance – and perhaps to align managers' and shareholders' interests – for most of the twentieth century".

Frydman and Saks' (2010) review of executive remuneration between 1936 and 2005 draws a similar conclusion. However, equity based remuneration is still an important aspect of executive remuneration contracts. In the Australian context, Matolscy and Wright (2007) report that 66 per cent of companies use some form of equity scheme. Ernst & Young (2006) and Rankin (2010) note that equity plans, particularly options, are the most common component of long term incentives plans used by Australian companies.

The use of equity incentives in remuneration contracts creates greater incentive for opportunistic behaviour (Hall and Murphy, 2003; Holmstrom and Kaplan, 2003). The issue of employee stock options has been linked to excessive risk taking and the

artificial manipulation of company stock prices (Hall and Murphy, 2003; Holmstrom and Kaplan, 2003). Consequently, a persistent criticism is that executive remuneration contracts favour management and are not sufficiently linked to company performance or shareholder value (Conyon and Peck, 1998; Vafeas, 2000). In addition, use of equity incentives requires a more sophisticated approach to managing executive remuneration. Hence, governance regulatory reforms seek to increase transparency of executive remuneration and limit the ability of executives to influence their own remuneration (Finegold et al., 2007). To address these issues governance reform has focused on (1) development of corporate governance codes that identify governance *best practice* for managing executive remuneration; and, (2) regulating to allow shareholders greater influence over decisions on executive remuneration.

2.3 CORPORATE GOVERNANCE CODES

The first Australian governance code, the Code of Corporate Practices and Conduct, was issued in 1991. It was developed through collaboration of the Australian Business Council, the Australian Stock Exchange, the Australian Institute of Company Directors, the Australian Society of Certified Practising Accountants, and the Institute of Chartered Accountants (Bosch, 2002). Its development was partly a response to the substantial governance failures that became evident following the collapse of several large corporations in the late 1980s. The Code of Corporate Practices and Conduct was voluntary and it set out principles and guidelines on the structure of corporate boards and director conduct (Bosch, 2002).

Around the same time the Cadbury Committee was appointed to review corporate governance practice in the UK. The Cadbury Committee was established in the aftermath of large corporate failures, for example, Polly Peck International, Bank of

Credit and Commerce International ('BCCI') and Maxwell Communications (Dedman, 2002). These failures led to a general lack in investor confidence in corporate accountability, governance and auditor performance (Weir and Laing, 2001). In 1992, the Cadbury Committee released its final report "Financial Aspects of Corporate Governance" (hereafter referred to as "the Cadbury Report") (The Committee on the Financial Aspects of Corporate Governance, 1992). The Cadbury Report proposed *best practice* corporate governance standards. A consequence of the Cadbury report was the introduction in 1992 of the UK Corporate Governance Code (originally called 'The Combined Code') which is applicable for all listed UK companies (UK Corporate Governance Code, 2010).

The Cadbury Report proposed voluntary governance standards rather than legislative requirements as the more appropriate approach to ensuring the effectiveness of corporate governance (The Committee on the Financial Aspects of Corporate Governance, 1992). In regard to executive remuneration, the recommendations of the Cadbury Committee were for the formation of a remuneration committee "consisting wholly or mainly of non-executive directors and chaired by a non-executive director, to recommend to the board the remuneration of the executive directors in all its forms, drawing on outside advice as necessary" (Provision 4.42, Cadbury Report, 1992). Later, two separate reviews commissioned by the UK government confirmed the appropriateness of the Cadbury recommendation for the establishment of an independent remuneration committee. The first review (known as the "Greenbury Report") focused on directors' remuneration (The Study Group on Directors' Remuneration, 1995), whilst the second (known as the "Higgs Report") examined the role and effectiveness of non-executive directors (Higgs, 2003). The UK Combined

Code issued in 1998 (revised in 2003, 2006 and 2010) includes these recommendations, and states that only independent directors should be appointed to the committee (Jones and Pollitt, 2004, UK Financial Reporting Council, 2003).

There are many similarities between the UK Corporate Governance Code and the ASX Good Governance Principles and Recommendations of 2003. Consistent with the UK Combined Code the ASX developed a *best practice* framework for corporate governance, and provided practical guidance on adoption of the ASX Recommendations. The stated aim of the ASX Recommendations was to "restore investor confidence and to promote transparency to enable shareholders to make comparative investment decisions" (ASX Corporate Governance Council, 2003, p. 7).

The ASX Recommendations outline principles and recommendations on key governance practices. In dealing with governance of executive remuneration, the ASX Recommendations follow the Cadbury Committee view that a remuneration committee is an efficient mechanism to provide oversight of remuneration policies (2007, p. 34, Australian Corporate Governance Council). Principle eight of the ASX Recommendations (2007) states that the remuneration committee should review and make recommendations to the board regarding company remuneration policies for senior executives and directors. The ASX recommends the committee have at least three committee members, the majority of which should be independent directors, and that the committee should appoint an independent chairperson (ASX Corporate Governance Council, 2007).

Although adoption of their respective codes is voluntary, the Australian Stock Exchange and the London Stock Exchange have adopted a *comply or explain* approach for corporate governance regulation. The listing rules of these stock exchanges outline

the rule. In Australia, companies are required to disclose in their annual report the extent of their adoption of the ASX Recommendations and provide an explanation for any non-adoption. The rationale for the *comply or explain* approach is that it enables companies to implement corporate governance practices that are relevant to their circumstances and operating environment (UK Corporate Governance Code, 2010). Hence, the governance codes seek active engagement on the issue of corporate governance by listed companies, rather than the adoption of a *tick the box* compliance mentality.

The US approach to the development of corporate governance regulation has been more prescriptive. The US enacted legislative requirements rather than rely on self-regulation or voluntary corporate governance codes (Aguilera and Cuervo-Cazurra, 2009). Corporate governance reform in the US has also occurred as a result of the regulatory response to corporate failure scandals (Holmstrom and Kaplan, 2003). The Sarbanes-Oxley Public Company Accounting Reform and Investor Protection Act of 2002 (hereafter referred to as "the Sarbanes-Oxley Act") was enacted in response to the collapse of several large US companies.

The legislation required significant changes to corporate governance practice (Holmstrom and Kaplan, 2003; Chhaochharia and Grinstein, 2007). In particular the Sarbanes-Oxley Act focused on the board, the integrity of financial reporting, executive remuneration, internal controls and auditor independence (Holmstrom and Kaplan, 2003; Coates, 2007). In the executive remuneration context, the new rules allow companies to recoup bonuses or other incentive based remuneration paid to and profits from the sale of company equity instruments by the Chief Executive Officer and Chief Financial Officer resulting from the material misstatement of the company financial report due to

misconduct (Sarbanes-Oxley Act (2002), section 304). The Sarbanes-Oxley Act also requires companies to form an independent remuneration committee (Dew-Becker, 2009).

Mandating committee formation means the US regulatory environment differs from the principles based voluntary code arrangement adopted in Australia and the UK. There is some movement towards mandatory governance requirements in Australia. A recent report into executive remuneration by the Australian Productivity Commission (2010) proposed the introduction of mandatory requirements for the formation and composition of the remuneration committee. As a result, effective from 1 July 2011, the ASX Listing Rules were amended to require companies included in the ASX 300 Index to form a remuneration committee consisting exclusively of non-executive directors (ASX Listing Rule 12.8).

2.4 SHAREHOLDER APPROVAL OF EXECUTIVE REMUNERATION

Recall that executive remuneration governance reform has focused on (1) development of corporate governance codes that identify governance *best practice* for managing executive remuneration; and, (2) regulating to allow shareholders greater influence over decisions on executive remuneration. The relevant corporate governance mechanisms have been discussed in the previous section. This section expands on the regulation designed to facilitate shareholder engagement of executive remuneration. Of particular relevance to this thesis is the introduction of the requirement for shareholders to vote on the annual remuneration report. The shareholder vote provides feedback to the directors and the remuneration committee as to shareholder satisfaction with the company's remuneration policy and practices (Carter and Zamora, 2009).

Regulation requiring shareholders to vote on the company remuneration report was first introduced in the UK (Deane, 2007). The legislation was the Directors' Remuneration Report Regulations (2002). The aim of the regulation was to enhance transparency in the remuneration setting process, improve accountability to shareholders and promote executive remuneration practices that were more effectively linked to shareholder outcomes (Deloitte, 2004). The legislation introduced enhanced disclosure requirements of executive remuneration practices and an annual non-binding shareholder voting requirement for listed UK companies. As the shareholder vote is non-binding, it is considered advisory only. More recently, in March 2012, the UK Government released a consultation paper outlining proposals to introduce an annual binding shareholder vote on company remuneration policy for the coming year and on termination payments (Department for Business Innovation and Skills, 2012).

Similar reforms were introduced in Australia by means of the Corporate Law Economic Reform Package Number 9 Act (2004) (also known as *'CLERP 9'*). The legislation requires the company annual remuneration report to be subjected to a non-binding or advisory shareholder vote. Sheehan (2009) notes that the goal of the reform is to align the interests of managers and shareholders by ensuring executive remuneration is appropriately aligned with company performance, and to promote shareholder engagement in the area of executive remuneration. Historically, few Australian remuneration reports have registered significant opposition by shareholders (Australian Productivity Commission, 2010, p. 95). However, a higher proportion of companies have experienced a higher protest vote by shareholders since 2008 (Thomas, 2011). Deane (2007) suggests that UK and Australian investors believe the annual non-

binding shareholder vote has resulted in improved pay for performance sensitivity in executive remuneration and decreased risks of rewarding failure.

Whilst descriptive and anecdotal evidence exists regarding shareholder voting behaviour, empirical research in this regard is quite limited (Dew-Becker, 2009) and largely UK focused. Sheehan (2010) finds that the shareholder vote on an annual remuneration report has influenced remuneration practice in the UK and Australia. However, the analysis examines the shareholder vote in the first three years of its operation and focuses on large UK and Australian companies. The results are largely inconclusive as to whether the annual shareholder vote has resulted in an improvement in executive remuneration practice. However, a recent study by Clarkson et al. (2011) found that between 2001 and 2009 the annual shareholder vote is associated with improved pay for performance linkage in Australian large companies. This conclusion is consistent with Deane's (2007) comments.

In the US, similar legislation was introduced by the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) (hereafter referred to as the 'Dodd-Frank Act'). The Dodd-Frank Act contained wide-ranging financial reforms and sought to "create a sound economic foundation to grow jobs, protect consumers, rein in Wall Street and big bonuses, end bailouts and too big to fail, and prevent another financial crisis" (US Senate Committee on Banking, Housing and Urban Affairs, 2010, p. 1). In addition to targeting banks and the financial regulatory system, the Dodd-Frank Act also introduced a number of corporate governance provisions, including mandatory periodic shareholder advisory voting on executive remuneration. Section 951 of the Dodd-Frank Act requires the shareholder vote to occur at least once every three years, with shareholders being entitled to vote every six years on whether the resolution should

occur every year, or every second year or every third year (Jenson et al., 2010). The first shareholder resolution was required for any annual meeting held on or after January 21, 2011. Consistent with the UK and Australian approach, the shareholder vote is not binding.

In 2010, the Australian Productivity Commission reviewed executive remuneration regulation and practices. The resulting report, "Executive Remuneration in Australia" (Australian Productivity Commission, 2010) recommended strengthening the annual non-binding shareholder vote. It proposed that a company receiving a negative vote of 25 per cent or greater on its annual remuneration report to shareholders must disclose in the next annual report how shareholder concerns have been addressed. Additionally, the Australian Productivity Commission proposed that if a company receives two consecutive negative votes of 25 per cent or greater on its annual remuneration report to shareholders, shareholders should have the opportunity to require the full board to stand for re-election (also known as the "*two strikes rule*").

The Australian government introduced legislation "Corporations Amendment (Improving Accountability of Director and Executive Remuneration) Bill 2011 (Cth)", effecting the Productivity Commission's recommendations. The amended legislation is effective from 2011. In the event of triggering the *two strikes* rule, the directors are required to put a *spill resolution* to shareholders at the same annual general meeting. If 50 per cent or more of eligible shareholders vote in favour of the spill resolution, the directors are required to call a general meeting within 90 days. The directors in office at the time of approving the annual remuneration report are required to stand for re-election at the general meeting.

2.5 CORPORATE GOVERNANCE SYSTEMS

In developing the research framework it is important to consider the institutional settings. Corporate governance systems have historically been classified into two models (Denis and McConnell, 2003). One system of corporate governance is the Anglo-American model (Shleifer and Vishny, 1997) which is typical of the Australian, UK and US. This model is defined by dispersed shareholding, and reliance on managers acting as agents of shareholders in controlling the company (Dignam and Galanis, 2004). The separation of ownership and control and the inherent agency problems are the main focus of corporate governance in the Anglo-American model (Jensen and Meckling, 1976; Brennan and Solomon, 2008).

The alternate model is the stakeholder model, which is historically applied to German and Japanese markets. This model is characterised more by concentrated shareholding and greater involvement and control by shareholders and creditors (Dignam and Galanis, 2004).

The Anglo-American model is the model relevant to this study. Therefore, the development of this thesis is extensively guided by discussion and prior studies that have been conducted in a similar setting, namely the US and UK.

Farrar (2001) identifies four means by which corporate governance is implemented in the Anglo-American model. The sources are legal regulation, stock exchange listing rules, financial reporting standards, codes of conduct and ethical standards. Corporate governance in Australia is derived from all four sources.

The Australian regulatory setting for listed companies is a mixture of regulatory requirements, listing rules, governance regulation and recommendations. The principle

regulations are included in the Corporations Act 2001*(Cth)*, the ASX Listing Rules which have legislative backing, and the mandated *comply or explain* requirements of the ASX Recommendations. This study focuses on regulation specific to remuneration committee formation, composition and operation.

2.6 SUMMARY

The discussion outlined in this chapter demonstrates the evolution of regulatory reform relevant to executive remuneration. Formal regulation has largely focused on mandating disclosure, supporting the development of governance codes and facilitating shareholder engagement in the UK and Australia, whereas the US has adopted a more prescriptive approach. Regulators in Australia, the US and the UK recognise that the remuneration committee performs an important role, and therefore governance reforms in each jurisdiction focus on the formation of an independent remuneration committee. The remuneration committee remains a key governance mechanism in ensuring companies adopt appropriate remuneration practices.

The discussion in this chapter is relevant as the two key mechanisms that regulatory reform focuses on to ensure the effective oversight of executive remuneration are directly examined by this study. Specifically, this research examines the remuneration committee and the shareholder vote on the annual remuneration report. The thesis examines determinants of adoption of the ASX remuneration committee recommendations and whether adoption influences remuneration levels and the link to measures of company performance in remuneration awarded to key executives. The next chapter discusses extant research relevant to the thesis.

3. LITERATURE REVIEW

3.1 INTRODUCTION

This chapter reviews prior literature relevant to the research questions presented in Chapter 1. The research questions are concerned with (1) factors that are associated with the formation and composition of the remuneration committee, (2) whether adoption of the ASX remuneration committee recommendations influences executive remuneration levels and the linkage between remuneration and company performance, and (3) whether adoption of the ASX remuneration committee recommendations are negatively associated with shareholder dissent regarding remuneration practices. Prior studies that have addressed these questions are reviewed in detail. Other areas of corporate governance literature relevant to the thesis are also reviewed, including agency theory and models of remuneration practice. This chapter does not review all the literature included in the broader executive remuneration and corporate governance streams. Instead the focus is on studies directly relevant to the thesis. Some studies included in the broader executive remuneration and corporate governance streams are informative to the development of hypotheses and research method and are discussed further in Chapter 4.

This chapter proceeds as follows. Section 3.2 defines corporate governance and summarises the interaction between corporate governance and executive remuneration oversight and practice. Section 3.3 discusses theoretical models of executive remuneration contracting. Section 3.4 reviews studies that have examined the relationship between the board of directors and executive remuneration, while section

3.5 reviews studies that have examined remuneration committee formation and operation. Key points from the chapter are then summarised in Section 3.6.

3.2 CORPORATE GOVERNANCE AND EXECUTIVE REMUNERATION

Numerous definitions of corporate governance have been suggested in prior accounting and finance literature. The definitions highlight the role of governance in protecting investors by mitigating the self-interested behaviour of managers and view governance as mechanisms that aim to ensure managers make choices that maximise the value of the company. For example, Shleifer and Vishny (1997, p. 737) define corporate governance in terms of investor protection as the "ways in which suppliers of finance to [companies] assure themselves of getting a return on their investment". Similarly, Denis and McConnell (2003, p. 2) define corporate governance as "the set of mechanisms – both institutional and market based – that induce the self-interested controllers of a company (those that make decisions regarding how the company will be operated) to make decisions that maximise the value of the company to its owners (the suppliers of capital)". Core, Guay and Larcker (2003, p. 27) focus on management decision-making in their definition of corporate governance as "the set of complementary mechanisms that help align the actions and choices of managers with the interests of shareholders".

The role of contracting in governance is the focus of Armstrong, Guay and Weber (2010, p. 181) who define corporate governance as "the subset of a [company's] contracts that help align the actions and choices of managers with the interest of shareholders". The ASX defines corporate governance in terms of its regulatory framework as "the framework of rules, relationships, systems and processes within and

by which authority is exercised. It encompasses the mechanisms by which [companies], and those in control, are held to account" (ASX Corporate Governance Council, p. 3).

This thesis is concerned with aspects of corporate governance that are highlighted in these definitions. This study addresses the role of the remuneration committee in reducing agency problems related to executive remuneration. Remuneration practice is the subject of contracts between the company and its managers. In addition, remuneration committee formation and composition are subject to the regulatory framework established by the ASX.

Defining corporate governance by reference to its role in mitigating agency problems is directly relevant to this thesis. The remuneration committee plays a central role in assisting the board of directors to devise appropriate remuneration contracts. This is achieved by ensuring remuneration contracts align the interests of managers and shareholders (Matsumura and Shin, 2005). By ensuring that remuneration is positively related to shareholder wealth, remuneration contracts encourage executives to focus on maximising shareholder wealth (Eisenhardt, 1989; Denis, 2001; Florackis, 2008; Dew-Becker, 2009).

Executive remuneration incentives are an important governance mechanism that complements the monitoring of managers that is provided by the board of directors (Jensen and Meckling, 1976; Core et al., 2003; Gillan, 2006; Ward et al., 2009). It is generally accepted that remuneration contracts are incomplete as it is impossible to address all possible actions and outcomes (Hart, 1995). Consequently, an effective remuneration committee plays an important role in advising the board regarding appropriate and effective executive remuneration contracting.

3.3 THEORETICAL MODELS OF REMUNERATION CONTRACTING

Remuneration contracts are used to reduce agency costs and as such incorporate different components designed to align the interest of the executive with that of shareholders (Jensen and Meckling, 1976; Fama, 1980). Competing models have been proposed to explain the process of remuneration contracting. These are the *optimal contracting* and *managerial power* models (Arthur and O'Neill, 2010). The optimal contracting model (Jensen and Murphy, 1990) has been the dominant theory until the managerial power model was proposed by Bebchuck and Fried (2003) (Geiler and Renneboog, 2011).

The optimal contracts model predicts that boards of directors establish optimal remuneration contracts with executives on an arm's length basis (Bebchuk and Fried, 2003; Weisbach, 2007). The model suggests that remuneration contracts link executive and shareholder interests, minimise agency costs, and enhance company value (Core et al., 2003).

The alternative managerial power model predicts that managers, particularly the CEO, exert power over boards and use this influence to extract rents subject to an *outrage constraint* (Bebchuk and Fried, 2003; Weisbach, 2007). *Outrage constraint* suggests that executive remuneration is constrained by costs related to public reaction to excessive executive remuneration (Weisbach, 2007). These costs relate to reputational damage to the directors, executives and company and other overt action by disenfranchised investors (Bebchuk and Fried, 2003). The result is that remuneration contracts are likely to favour management, and negatively impact company value as resources are diverted into excessive remuneration contracts at the expense of shareholders (Bebchuk and Fried, 2003; Core et al., 2005).

Prior studies have tested the optimal contracting and managerial power models' ability to explain contracting practice, but the empirical evidence is mixed (Frydman and Jenter, 2010). Some studies have reported results that are inconsistent with the managerial power model (Core et al., 2005; Dew-Becker, 2009; Frydman and Saks, 2010). Other studies have found that the optimal contracting and managerial power models are complementary explanations. That is, suboptimal contracting can occur but, in the long-run, incentive contracts are relatively efficient at addressing agency conflicts (Shleifer and Vishny, 1997; Bebchuk and Fried, 2003; Sapp, 2008).

Tosi et al. (2000) conducted a meta analysis of empirical literature on executive remuneration. They find evidence consistent with the managerial power model for executive-controlled companies, and evidence supporting the optimal contracts model for shareholder-controlled companies. Literature tends to classify companies as shareholder-controlled if a minimum of five per cent of issued ordinary equity is held directly or indirectly by one shareholder who is not involved in the management of the company (Gomez-Mejia et al., 1987). Management-controlled companies are those companies where no shareholder, directly or indirectly, holds five per cent or more of the issued ordinary equity (Gomez-Mejia et al., 1987). This suggests that the ability of managers to manipulate remuneration contracts for their benefit is dependent on company circumstances, and that neither model provides a complete explanation.

This thesis is concerned with the role of the remuneration committee in implementing remuneration contracts that reduce agency conflicts. In an optimal contracting environment, the remuneration committee provides advice to the board to improve the design of remuneration contracts. In a contracting environment affected by managerial power, the monitoring role of the remuneration committee is likely to

minimise the extent to which managers are able to use their influence to extract rents. Therefore, regardless of whether remuneration contracts are determined as an optimal contract or as the result of managerial power, the remuneration committee has an important role in aiding the board with developing effective executive remuneration practice.

3.4 BOARD OF DIRECTORS AND EXECUTIVE REMUNERATION

This section reviews prior studies that have considered the role of the board of directors in determining executive remuneration. These studies are relevant to this thesis because directors are ultimately responsible for executive remuneration oversight and the remuneration committee is a sub-committee of the board. Board research has considered the relation between board composition and executive remuneration levels, structure, and pay for performance sensitivity. In terms of board composition, the characteristic mainly examined is board independence on the basis that independent directors reduce agency costs associated with executive remuneration. In addition, the studies have tended to focus on remuneration of the company CEO. Where the study has also examined the role of the remuneration committee in addition to the role of the board, the discussion related to the remuneration committee is included in section 3.5.

Several US studies find that board composition is associated with effective remuneration contracts. Core et al. (1999) examine whether CEO remuneration is associated with corporate governance quality. The study uses measures of total remuneration, cash remuneration and salary (i.e. the fixed component of remuneration) of the CEO of 205 large US companies over a three year period between 1982 and 1984. The study finds that board characteristics related to higher levels of CEO remuneration include CEO duality, board size, greater proportion of affiliated directors,

outside directors appointed by the CEO or otherwise considered non independent, the number of additional board appointments and director age. Shareholder characteristics, in particular, block holders, are associated with lower levels of CEO remuneration. The study also shows that traditional economic determinants of CEO remuneration, for example company size, growth opportunities, company risk and measures of company performance are associated with the level of CEO remuneration. The results suggest that companies with weaker governance structures have higher agency costs and pay their CEOs higher remuneration.

Ryan and Wiggins (2004) examine the relation between board composition and director remuneration for 1,018 US companies in 1997. They find that companies with less independent directors, CEO duality, and a powerful entrenched CEO have inefficient remuneration contracts. The results indicate monitoring of remuneration is impeded by a lack of board independence particularly in circumstances where there is a strong CEO.

Brick et al. (2006) analyse the relationship between cash and total remuneration levels of CEO and directors in 1,441 US companies between 1992 and 2001. They control for company, governance and CEO characteristics. Whilst the focus of the study is on examining the correlation between CEO remuneration and director remuneration, they find that the need for monitoring of managers is positively associated with director remuneration. The results also indicate *cronyism* between directors and the CEO is reflected in the CEO's remuneration arrangements. Overall, the study suggests that the board of directors is not necessarily able to effectively minimise agency costs related to executive remuneration.

Chhaochharia and Grinstein (2009) study CEO remuneration and board structure for 865 US companies operating during the period from 2000 to 2005. The study examines whether the stricter requirements for board composition introduced by the Sarbanes-Oxley Act of 2002 and new listing rules of the New York Stock Exchange (NYSE) and The National Association of Securities Dealers Automated Quotations (NASDAQ) stock market influence remuneration decisions. Specifically, the study focuses on three board structure requirements, a majority of independent directors, the formation of an independent nomination committee and the formation of an independent remuneration committee. The components of CEO remuneration used are total remuneration, equity based remuneration and non-equity based remuneration. They control for economic determinants of executive remuneration, company size, company performance, CEO tenure and industry effects. They find the introduction of the rules is associated with a decrease in CEO remuneration for companies that were least compliant prior to the new rules. In particular, board independence is found to be strongly associated with a decrease in CEO remuneration. The decrease was observed to be greater for bonus and stock option-based remuneration.

The authors find that non-affiliated block shareholders and institutional shareholders provide monitoring of remuneration. They conclude that the importance of independent directors in the executive remuneration contracting process reduces when these substitute monitoring mechanisms exist. They also conclude that expanding the board to achieve board independence when other monitoring mechanisms exist can result in sub-optimal remuneration arrangements. Chhaochharia and Grinstein (2009) suggest that the results indicate board independence is more important than remuneration committee independence in the executive remuneration contracting

process. Overall, the study shows the relation between board characteristics and the determination of remuneration.

US studies show that board characteristics are a relevant determinant of executive remuneration, particularly the CEO. These studies demonstrate that the need for monitoring of executive remuneration is related to agency costs experienced by the company. Sapp's (2008) study extends this line of research by examining remuneration arrangements for the wider executive team.

Sapp (2008) examines the relation between corporate governance mechanisms and executive remuneration for the top five executives of 400 listed Canadian companies between 2000 and 2005. In particular, the study analyses the role of ownership characteristics, regulatory environment, the board and the remuneration committee in determining executive remuneration. Sapp (2008) finds that the level and structure of executive remuneration is influenced by characteristics related to the board, remuneration committee, CEO, shareholders and the competitive environment. Board characteristics associated with higher levels of remuneration are board size, additional director positions held and longer board tenure. Overall, the results provide further evidence that monitoring of remuneration is impeded by a lack of board independence.

These studies demonstrate that in addition to economic determinants of remuneration, board characteristics are relevant to remuneration arrangements of the CEO and the wider executive team. Studies of UK companies provide mixed evidence as to the impact of board structure on the remuneration contracting process. UK studies also focus predominantly on the remuneration of the CEO.

Conyon and Peck (1998) examine the association between board structure and the remuneration committee on CEO remuneration for 100 large UK companies between 1991 and 1994. The companies included in the sample represent 75 per cent of the market capitalisation of listed companies during the sample period. They examine the impact of non-executive directors, the remuneration committee, and the presence of non-executive directors on the remuneration committee on CEO remuneration levels and the pay for performance sensitivity of CEO remuneration. They find that the presence of non-executive directors does not impact CEO remuneration. However, the presence of executive directors is associated with higher CEO remuneration levels. The study also finds that the presence of non-executive directors has a positive influence on the pay performance sensitivity of CEO remuneration. The results suggest that while non-executive directors do not significantly influence CEO remuneration levels, they are associated with aligning the CEO's remuneration with company performance.

Ozkan (2007) analyses the influence of ownership and board structure on total CEO remuneration in 414 large UK companies in 2004. Higher CEO cash remuneration levels are associated with higher board independence and board size. The results indicate that institutional shareholders, block holders and increases in director shareholdings are negatively associated with CEO remuneration. Higher growth opportunities and company size are also associated with higher levels of CEO remuneration. Overall the findings suggest that monitoring of executive remuneration is not strengthened by board independence, but by external shareholder characteristics related to institutional shareholders and block holders. This result supports the conclusion drawn by Chhaochharia and Grinstein (2009) in their study of US

companies, that increasing board independence where other substitute monitoring mechanisms exist does not necessarily result in optimal remuneration arrangements.

Johnston (2007) examines the association between market forces and internal controls on the CEO's salary in 220 large UK companies in 1996. The internal control measures examined reflect board and board committee characteristics that are consistent with the recommendations included in the Cadbury Report (1992), Greenbury Report (1995) and Hampel Report (1998). In particular, (1) the board should appoint a minimum of three non-executive directors, (2) the roles of CEO and board chairperson should be separated, (3) the CEO should not be a member of the remuneration committee, and (4) only non-executive directors should be appointed to the remuneration committee, two of which are independent. The study finds board independence is associated with higher levels of remuneration. CEO duality has no impact on the CEO's salary. The study also indicates that company profitability, sales revenue and industry are positively associated with higher CEO salaries. Consistent with Ozkan (2007), the author finds that increased board independence leads to higher CEO remuneration levels on a cross–sectional basis.

Two UK studies have examined executive remuneration arrangements between 1983 and 2005. Gregory-Smith (2009) examines the association between board characteristics and the composition of the remuneration committee on the CEO remuneration contracting process in 290 large UK companies between 1996 and 2005. He finds that the appointment of a higher proportion of insiders to the board leads to lower CEO remuneration. The study also reports that prior year remuneration, company size and total shareholder return are positively associated with higher levels of remuneration awarded to the CEO. Companies in which the role of the CEO and board

chairperson are performed by the same person are not associated with higher remuneration levels. The overall conclusion of the study is that in UK companies there is no evidence of rents' capture in the remuneration contracting process.

Guest (2010) examines the impact of board structure on the cash remuneration of the CEO for 1,880 UK companies between 1983 and 2002. The study examines the impact the Cadbury Report (1992) has had on remuneration practice. In particular the study examines the impact of voluntary adoption of the Cadbury Report recommendation that the board has at least three non-executive directors. Specifically, the study examines the role of non-executive directors in the remuneration contracting process and the influence board size has over the remuneration contracting process. Guest (2010) finds that companies that voluntarily adopt the Cadbury Report recommendation regarding board structure are associated with a lower rate of increase in CEO remuneration and that board size increases the rate of growth in CEO remuneration. The results also indicate that the pay for performance sensitivity of CEO remuneration is generally weak. However, the pay for performance link becomes stronger as the proportion of non-executives appointed to the board increases. The study demonstrates that voluntary governance codes influence corporate practice and that non-executive directors perform an important role in aligning the CEO's remuneration contract with shareholder interests.

The UK studies have shown that, contrary to expectations, board independence as a key monitoring mechanism is not necessarily effective at moderating the level of remuneration awarded to the CEO. However, studies that have examined the association between remuneration and company performance, demonstrate that board independence is associated with remuneration arrangements that evidence a stronger

link to company performance. The Australian evidence also suggests that board independence is not an effective moderator of CEO remuneration.

In Australia, an early study by Lawrence and Stapledon (1999) examined 100 of the largest Australian companies in 1995. The study considered whether board composition was related to company performance and whether board structure and remuneration committee composition influenced the CEO's remuneration. They find the proportion of independent directors appointed to the board does not influence the CEO's salary or bonus. This study suggests that in Australian companies in 1995, the independent directors did not play a significant role in the determination of the CEO's remuneration.

Evans and Evans (2001) considered the relation between non-executive directors and CEO cash remuneration. The study examined 178 companies drawn from the ASX 500 index in 1997. The study controls for company size and company performance. They find that board independence measured by the proportion of non-executive directors does not significantly impact CEO remuneration. Consistent with US and UK research, the results also provide evidence that company size and performance are economic determinants of CEO remuneration. Contrary to expectations, the study suggests board independence does not have the desired impact on remuneration contracting process.

Heaney et al. (2010) examine determinants of total CEO remuneration for 1,144 listed Australian companies in 2006. Total remuneration incorporates all components of remuneration awarded to the CEO, including salary, short term bonuses, other short term non-monetary benefits, long term incentive plans, share options, other long term benefits, superannuation, pension benefits and other post-employment benefits. Whilst

the study is also a cross-sectional study, the author extends the Australian literature by using a larger sample and incorporating a larger number of economic determinants into the model. Company characteristics included in the analysis include board characteristics, block holders, institutional shareholders, leverage, company size, performance, growth and industry effects. The study period follows the introduction of Australia's version of the international accounting standards (AIFRS) in 2005, requiring more detailed disclosure rules related to executive remuneration.

Board characteristics examined by Heaney et al. (2010) include board size, the proportion of non-executive directors, and whether the roles of Chairperson and CEO were performed by the same person. They find that board size is positively associated with CEO remuneration levels, whilst the proportion of non-executive directors is not significantly associated with CEO remuneration levels. Further, contrary to expectations, the study finds that where the CEO is also the chairperson of the board lower total remuneration is awarded to the CEO. The results also suggest that current year remuneration does not result in increased company performance in the following year. The results indicate that performance and the level of ownership by block holders are not associated with CEO remuneration, however the presence of a large singular block holder moderates CEO remuneration. Although the study period is nine years after the Evans and Evans (2001) study, the findings provide consistent evidence, across a broader sample, that on a cross-section basis, voluntary governance reform did not have the anticipated impact on the CEO remuneration contracting process.

Three studies examine the remuneration practice of Australian companies between 1999 and 2006. Chalmers et al. (2006) is one of the first Australian studies to examine the association between economic, governance and ownership characteristics as

determinants of CEO remuneration over time. The study examines 200 large Australian listed companies between 1999 and 2002. In particular, the authors examine whether CEO remuneration arrangements provide evidence of rent extraction or reflect optimal contracting arrangements. The study adopts the methodology used by Core et al. (1999). The study extends the Australian literature by examining different components of remuneration of the CEO rather than focusing solely on cash remuneration. The components of CEO remuneration used in the study are total remuneration, fixed remuneration (i.e. salary, superannuation and non cash benefits), bonuses, value of options awarded and shares issued to the CEO. The study includes board characteristics, ownership characteristics, performance, company size, growth and industry effects in the regression analysis. The study finds some evidence of rents capture, however the evidence is negligible and not persuasive. Consistent with extant research, board size is associated with higher total remuneration and higher salary and bonus awarded to the CEO. The study does not provide evidence that board independence plays a significant role in the executive remuneration contracting process.

Tian and Twite (2010) analyse a sample of 1,693 Australian companies for the years 2000 to 2005. The study examines the relation between ownership characteristics and board characteristics on the pay for performance sensitivity in CEO remuneration contracts. Multiple measures of CEO remuneration are used in the study. These are short term cash remuneration, short term total remuneration, equity based remuneration, long term remuneration and total remuneration. The study controls for company performance, company size, growth and industry effects. Tian and Twite (2010) find that board independence has little influence on the pay for performance link in Australian listed companies. Company size is a significant determinant of total CEO

remuneration, short term cash remuneration, equity based remuneration and long term remuneration. The results also indicate the presence of block holders has a positive impact on the link between pay and performance in CEO remuneration. Overall the study provides evidence that the oversight provided by external block holders, rather than independent directors, is a more effective monitor of executive remuneration.

Capezio et al. (2011) examine CEO cash remuneration and board structure of 663 large Australian companies in the period from 1999 to 2006. The components of cash remuneration incorporated into the study are total cash remuneration, annual cash incentive and annual non incentive cash remuneration. The study controls for company size and risk. The study finds that the appointment of an independent board does not significantly influence CEO cash remuneration. Consistent with expectations, board size is positively and significantly associated with higher remuneration levels of the CEO. However, contrary to expectations, insider boards are not associated with excessive CEO remuneration. The study's results identify only a weak link between board independence and pay for performance sensitivity in CEO remuneration. The study suggests that boards that adopt accepted *best practice* governance practice regarding board structure are not more effective at moderating CEO remuneration or ensuring remuneration contracts are linked to company performance, when compared to boards with a majority of insider directors.

The studies reviewed above demonstrate that in addition to economic determinants of remuneration, board characteristics are relevant to remuneration arrangements. The research reviewed indicates that board independence does not consistently influence executive remuneration levels as expected. Australian studies find

that non-executive directors do not moderate CEO remuneration levels, nor are they more effective at linking remuneration to company performance.

Governance reform in each jurisdiction focuses on board independence as an important monitoring mechanism to reduce agency costs. An independent remuneration committee is identified as the appropriate governance mechanism to enhance the remuneration contracting process. In examining executive remuneration, consideration of the remuneration committee's presence and operation is necessary (Johnston, 2007). The next section examines research related to remuneration committee composition and practice.

3.5 REMUNERATION COMMITTEES AND EXECUTIVE REMUNERATION

Corporate governance regulation in Australia, the US and the UK include recommendations or requirements for the formation and composition of audit, remuneration and nomination committees. Prior literature dealing with the governance role of the remuneration committee is of direct relevance to this study and is reviewed in this section.

Board committees are formed to assist the board in carrying out their duties effectively (Brown et al., 2011). In their review of extant research on boards and corporate governance, Adams et al. (2010) show that board committees are performing an increasing amount of board work. Committees are acknowledged as improving the quality of corporate governance provided by the board because of their extensive time commitment to specific tasks and greater mastery of complex information (Spira and Bender, 2004). Detailed review of key operational matters often occurs at board committee level, which serves to inform decisions of the full board (Kesner, 1988; Lorsch and MacIver, 1989; Spira and Bender, 2004). Huang, Lobo and Zhou (2009)

find that the effectiveness of board monitoring is improved by delegation of duties to a board committee.

The majority of prior board committee studies have been concerned with the audit committee and its contribution to ensuring the integrity of financial reporting (Carson, 2002; Klein, 2003). Overall, research regarding the remuneration committee is a small portion of prior board committee studies (Sun and Cahan, 2009). Furthermore, Australian research on the remuneration committee is less developed than in the US and UK (Kiel and Nicholson, 2003; Huang et al., 2009).

3.5.1 The Remuneration Committee – Formation and Composition

The Demand for Monitoring of Executives

The review of board studies highlights the demand for effective monitoring of executive remuneration. As this thesis is focused on the use of remuneration committees to reduce agency costs associated with executive remuneration, the relationship between agency costs and corporate governance is directly relevant. The following section examines studies that provide insight into the relation between agency costs and the demand for corporate governance mechanisms. Prior studies show a positive association between external demand for monitoring of executives and agency costs (Cui et al., 2007; Rainsbury et al., 2008).

Dey (2008) examines the relation between agency problems and corporate governance mechanisms employed by 371 large US companies between 2000 and 2001. The study uses exploratory principal component analysis to a range of corporate governance variables to identify key governance factors. These factors broadly reflect the board, executive remuneration, auditor independence, the audit committee and the

integrity of financial reporting. Company characteristics used to measure the level of agency problems experienced by each company are company size, company complexity, shareholder characteristics, growth opportunities, leverage, risk and free cash flows.

Dey (2008) finds the governance mechanisms used by a company are directly related to the level of agency costs experienced by the company. In particular, the results are more pronounced with regard to the composition and operation of the board of directors and the audit committee. The results also indicate that company size, widely dispersed shareholding, leverage and risk are associated with the demand for good corporate governance practice. Overall the study highlights that companies with higher agency costs experience greater demand for the adoption of appropriate governance mechanisms.

Focusing on the audit committee, Klein (2002) examines the determinants of audit committee independence for 400 S&P 500 US companies between 1991 and 1993. She finds that the presence of an independent audit committee is positively related to the demand for monitoring. The results also indicate that the ability to constitute an independent audit committee is related to board capacity, in particular, the availability of independent directors.

In a similar vein, Rainsbury et al. (2008) examine the factors associated with voluntary adoption of New Zealand's *best practice* governance guidelines regarding audit committee composition in 56 listed New Zealand companies in 2001. In particular they examine the influence agency costs related to leverage, shareholder characteristics, growth opportunities, auditor quality, and board capacity have on adoption of *best practice* guidelines. They find that agency costs are not significantly related to adoption

of *best practice* audit committee composition guidelines. Their results indicate that companies with greater board capacity, that is larger board size and greater board independence, are more likely to adopt the *best practice* guidelines. Overall the study provides direct empirical evidence that board capacity is an important determinant of board committee independence.

Huang et al. (2009) examine the determinants and consequences of the voluntary formation of a governance committee in 1,500 S&P companies between 1996 and 2002. They find that higher agency costs are associated with the committee's formation. The results also indicate that board capacity, in particular larger board size, availability of independent directors and board diligence is also positively associated with the formation of a governance committee.

Overall, the studies reviewed show that the demand for monitoring of management is related to agency costs. The studies by Klein (2002), Rainsbury (2008) and Huang et al. (2009) also demonstrate that the ability to constitute independent board committees is also constrained by the board's capacity. These findings are directly relevant to addressing the research questions posed in this thesis.

A review of the studies that have directly examined factors relevant to the formation and composition of remuneration committees is included in the following section. For the purposes of this review, prior studies of the remuneration committee are categorised into two groups that are consistent with the areas of research outlined in the research questions for this thesis. The first group of studies are those that have considered the determinants of remuneration committee formation and composition. The second group of studies are those that have considered the operation of the

remuneration committee, that is whether there is an association between committee formation and composition and effective remuneration contracts.

Remuneration Committee Formation and Composition

This section reviews studies that have directly examined remuneration committee formation and composition. Table 3-1 provides a summary of the key points from each of the studies reviewed. Early US studies examine the relation between composition of the board of directors and the remuneration committee. Over time, this research has tested this relation for an increasingly wider range of board characteristics. These board characteristics include board tenure, independence, gender, additional board appointments and shareholding.

The first two studies discussed here examine a number of board committees. Kesner (1988) conducted an early empirical study of the determinants of audit, nomination, remuneration and executive committee composition for 250 large listed US companies in 1983. The study found that directors with longer tenure, independent directors, and directors with a business background are more likely to serve on one of the committees.

In an extension of the Kesner (1988) study, Bilimoria and Piderit (1994) examined 300 large US companies listed in 1984. The focus of their study was determining gender bias in board committee membership. Consistent with Kesner (1988) they find that director tenure and independence are associated with committee composition. The results also indicate that the number of other board positions held by directors is also significant.

Vafeas (2000) further extends this line of research in a study of 6,607 directors of 576 large US listed companies in 1994. The study focuses solely on the determinants of remuneration committee composition. The findings of prior studies with regard to director independence, tenure and other board positions are confirmed. Vafeas (2000) finds a very low level of non-independent director committee membership and reports that the number of executive directors participating as committee members steadily declines in US companies during the 1990s. He shows that independent directors on the committee usually serve on other board committees, which suggests committee participation by non-independent directors is an indication of a concentration of power. The same relation was not observed for independent directors. Vafeas (2000) also does not find that the level of director shareholding is related to remuneration committee membership. Overall, Vafeas (2000) suggests the findings indicate that the board's monitoring of committee membership improves composition, which serves to protect shareholder interests.

Newman (2000) examines in more detail how ownership structure is associated with the decision to appoint non-independent directors to the remuneration committee for 161 US Fortune 250 companies between 1991 and 1993. Newman introduces company size as a control mechanism in the regression analysis. Newman (2000) finds that CEO shareholding is negatively associated with the independence of the remuneration committee, and that outside shareholding is positively associated with independence of the committee. The results also indicate that as company size increases, the proportion of insider members appointed to the remuneration committee decreases. Overall the results suggest that CEO shareholding provides the CEO with power to

control board decisions regarding the appointment of non-independent directors to the remuneration committee.

Overall, the evidence suggests that remuneration committees in US companies have become more independent over time (Conyon, 2011). Newman and Mozes (1999) find that 47 per cent of remuneration committees appoint at least one insider member to the committee. Newman and Mozes (1999) find that of these committees, the mean percentage of insider members appointed is 36 per cent. Vafeas (2000) reports that the number of executive directors participating as committee members steadily declines for US companies during the 1990s. Conyon (2011) finds that between 1998 and 2008 the number of independent directors appointed to remuneration committees increases. Increasing committee independence in US companies reflects changes to the US institutional environment which mandates the formation of independent remuneration committees.

UK research has largely focused on remuneration committee operation. However, one UK study has directly examined remuneration committee formation. Main and Johnston (1993) examine remuneration committees in 220 large UK listed companies in 1993. They find that as company size and turnover increases, the likelihood the company forms a remuneration committee also increases. Board size was also identified

TABLE 3-1: REMUNERATION COMMITTEE STUDIES – FORMATION AND COMPOSITION

Study	Year	Period	Country	Size	Scope of Study and Key Findings
Kesner	1988	1983	US	250	▪ Examines the structure of board committees. ▪ External directors, director tenure and director independence are associated with remuneration committee composition.
Bilmoria and Piderit	1994	1984	US	300	▪ Focus on the appointment of female directors to board committees. ▪ Extends Kesner (1988) study. ▪ Director independence, board tenure, the number of additional board appointments, occupation and gender are associated with remuneration committee composition.
Vafeas	2000	1996	US	576	▪ Extends Kesner (1988) and Bilmoria and Piderit (1994) studies. ▪ Remuneration committees are becoming more independent over time. ▪ External directors, directors' tenure, the number of additional board positions held by the directors and directors age are associated with remuneration committee composition.
Newman	2000	1991-93	US	161	▪ Examines the relation between shareholder characteristics on remuneration committee composition. ▪ CEO shareholding is positively associated with the composition of the remuneration committee including insider directors. ▪ Outside shareholding is positively associated with remuneration committee independence.

Study	Year	Period	Country	Size	Scope of Study and Key Findings
Main and Johnston	1993	1990	UK	220	▪ Examines remuneration committee composition and operation. ▪ Larger companies, the presence of non-executive directors, and companies experiencing high turnover are more likely to form a remuneration committee. ▪ Board tenure and director age are not associated with remuneration committee formation.
Carson	2002	1996	Australia	361	▪ Examines the factors related to the presence of board committees. ▪ Big 6 auditor, number of additional board appointments, higher institutional shareholding, and the proportion of independent directors are associated with remuneration committee formation.
Cotter and Silvester	2003	1997	Australia	109	▪ Examines the determinants of board composition and the composition of audit and remuneration committees. ▪ Strong association between board independence and committee independence.
Windsor and Cybiniski	2009	2001	Australia	123	▪ Examines the relation between remuneration committees and CEO remuneration. ▪ Composition of 40 per cent of committees had 70 per cent or more independent directors appointed.

as a determinant of committee formation. However, other board characteristics related to board tenure and director age were not associated with committee formation.

In Australia, remuneration committee composition research is less developed. The studies conducted use data that predates the introduction of the ASX Recommendations in 2003. To date, no comprehensive study of determinants of remuneration committee formation and composition in Australian companies has been conducted. Consistent with US research, the few studies that have considered remuneration committee formation examine a range of board committees rather than focusing solely on remuneration committees.

Carson (2002) examines the factors associated with formation of the audit, remuneration and nomination committees for a sample of 361 large listed companies in 1996. The study finds that 57 per cent of the sample companies have formed a remuneration committee. Carson (2002) reports that the engagement of a Big 6 auditor, the extent of board inter-corporate relationships measured by the number of other directorships held by the directors, and higher levels of institutional shareholding are positively associated with committee formation.

Cotter and Silvester (2003) analyse the composition of the board of directors and the audit and remuneration committees of 109 of the largest 200 listed Australian companies in 1997. The rationale for the large company focus of the study is that larger companies are more likely to form board sub-committees. The focus of the study is on determinants of board and board committee independence. They extend the literature by examining committee composition and by including a wider range of company characteristics in their analysis. The authors document a strong positive association between board independence and remuneration committee independence, and observe

that the audit and remuneration committees have higher levels of independence than the board. The results indicate that company characteristics related to complexity measured by industry and geographical segments, growth, leverage, management shareholding, company performance and company size are not associated with remuneration committee independence. Overall the results suggest that boards use their sub-committees as monitoring mechanisms with regard to the integrity of financial reporting and executive remuneration oversight.

Windsor and Cybinski (2009) analyse the moderating influence of remuneration committee independence on CEO remuneration, company size and company performance in 123 large Australian listed companies in 2001. Whilst the study's focus is on remuneration committee operation, they find that approximately 40 per cent of remuneration committees in 2001 had 70 per cent or more non-executive directors.

The review of extant research shows that very few studies have directly examined factors relevant to remuneration committee formation and composition. No Australian study has examined determinants of remuneration committee formation and composition subsequent to the introduction of the ASX remuneration committee recommendations. This thesis addresses this gap by providing detailed descriptive material on the level of adoption of ASX remuneration committee recommendations across a broad range of company sizes. The Australian environment allows the identification of incentives for adoption and structure of remuneration committees that do not include complying with mandated requirements. This allows for a comparison with other jurisdictions that either mandate remuneration committee formation and composition such as the US, or have implemented voluntary guidelines that differ from the ASX Recommendations, such as in the UK.

Theory suggests that independent remuneration committees are a response to agency issues related to executive remuneration. The results of prior studies show that managerial power can be a factor, and that regulation has increased the level of remuneration committee independence. However, the issue as to whether the formation and composition of remuneration committees are a response to agency costs has not been directly assessed in extant literature.

Additionally, prior studies use samples of large companies. A broader sample is needed before more generalisable conclusions can be drawn. This thesis seeks to address these gaps in the literature.

3.5.2 Remuneration Committee Efficacy

This thesis is also concerned with the operation of the remuneration committee in implementing remuneration contracts that reduce agency costs and align the interests of managers and shareholders. This section reviews studies that have directly examined the operation of the remuneration committee. Prior studies have generally considered this issue by examining the level of remuneration and the sensitivity of executive remuneration to company performance. A review of this literature follows. The review is then extended beyond the approach adopted in extant literature by incorporating the non-binding shareholder vote on the annual remuneration report as a measure of remuneration committee efficacy. A review of the limited literature on the non-binding shareholder vote is then presented.

Remuneration Committee Operation

This section reviews studies that have considered the operation of the remuneration committee by examining the level of remuneration and the sensitivity of executive remuneration to company performance. A number of studies reviewed have considered the level of remuneration and the sensitivity of remuneration to company performance. The findings of these studies are separated and discussed below. Studies that have considered the association between the remuneration committee and the level of executive remuneration are reviewed first. Then, studies that have examined the relation between the remuneration committee and the pay for performance sensitivity in executive remuneration are reviewed. The research is predominantly focused on the remuneration of the CEO. Table 3-2 summarises the key findings of these studies.

Remuneration Levels

A number of prior studies have examined the association between the remuneration committee and the level of executive remuneration, particularly that of the company CEO. The research examines whether insiders appointed to the remuneration committee results in rents capture. Subsequent to governance reform, the research has examined whether independent committees moderate the levels of remuneration awarded executives, in particular the CEO.

TABLE 3-2: STUDIES OF REMUNERATION COMMITTEE OPERATION

Study	Year	Period	Setting	Size	Pay Examined		Scope of Study and Key Findings
					Level	Performance	
Newman and Wright	1995	1993	US	161	✓	✓	▪ Examines the relation between remuneration committees and CEO remuneration. ▪ Non independent remuneration committees are associated with higher remuneration. Independent remuneration committees are associated with stronger pay for performance sensitivity in CEO remuneration. This finding is pronounced where company performance is unfavourable.
Daily, Johnson, Ellstrand and Dalton	1998	1992-94	US	194	✓		▪ Examines whether remuneration committees are a determinant of CEO remuneration. ▪ No evidence affiliated directors are associated with higher levels of remuneration.
Newman and Mozes	1999	1991 - 93	US	161	✓	✓	▪ Examines the composition of the remuneration committee and the CEO remuneration process. ▪ Whilst remuneration levels are not affected by the appointment of executive directors to the remuneration committee, the structure of the CEO's remuneration is more favourable when insiders are appointed to the remuneration committee. ▪ Committee independence is not related to remuneration.

Study	Year	Period	Setting	Size	Pay Examined		Scope of Study and Key Findings
					Level	Performance	
Anderson and Bizjak	2003	1985 - 98	US	110	✓		▪ Examines the relation between remuneration committee compositon and the stucture of CEO remuneration. ▪ Remuneration committee independence does not have a significant influence on the level of CEO remuneration. The appointment of executives to the committee does not result in more opportunistic behaviour. ▪ Mandating the use of independent remuneration committees may not be effective at reducing the levels of executive remuneration or ensuring stronger pay for performance sensititivity.
Vafeas	2003	1991 - 97	US	271	✓	✓	▪ Examines relation between the composition of the remuneration committee and CEO remuneration. ▪ No association between the presence of insiders on the remuneration committee and CEO remuneration levels. ▪ Identifies some opportunistic behaviour by insiders prior to change in SEC rule and Internal Revenue Rules. ▪ Stronger pay for performance sensitivity in CEO remuneration was identified following the changes in regulation.

Study	Year	Period	Setting	Size	Pay Examined		Scope of Study and Key Findings
					Level	Performance	
Conyon and He	2004	1998 - 2001	US	455	✓	✓	▪ Examines remuneration committees and CEO remuneration in companies engaged in an initial public offering. ▪ The appointment of executive directors or CEOs to the remuneration committee is not associated with higher levels of CEO remuneration or weaker pay for performance incentives.
Sun and Cahan	2009	2001	US	812		✓	▪ Examines the the relation between remuneration committee quality and CEO cash remuneration. ▪ High remuneration committee quality is associated with a stronger pay for performance alignment in CEO cash remuneration.
Sun, Cahan and Emanuel	2009	2001	US	474		✓	▪ Examines the the association between remuneration committee quality, the award of CEO stock option grants and future company performance. ▪ High remuneration committee quality results in enhanced incentive alignment in the executive remuneration contracting process.
Main and Johnston	1993	1990	UK	220	✓	✓	▪ Analyses remuneration committee composition and operation. ▪ Remuneration committees are associated with higher levels of remuneration and do not result in a stronger pay for performance sensitivity in CEO remuneration.

Study	Year	Period	Setting	Size	Pay Examined		Scope of Study & Key Findings
					Level	Performance	
Conyon	1997	1988 - 93	UK	213	✓	✓	▪ Examines the relation between (1) directors' remuneration, company size and company performance; and (2) the existence of a remuneration committee and directors' remuneration. ▪ Remuneration committees are associated with lower growth rates in director remuneration in some circumstances.
Conyon and Peck	1998	1991 - 94	UK	94	✓	✓	▪ Examines the association between the presence and composition of the remuneration committee on CEO remuneration. ▪ The presence of a remuneration committee is associated with higher levels of CEO remuneration. ▪ Remuneration committee independence is associated with higher levels of CEO remuneration and stronger pay for performance.
Benito and Conyon	1999	1985 – 94	UK	211	✓	✓	▪ Analyses determinants of directors' remuneration. ▪ Remuneration committees do not influence cash remuneration. ▪ Weak evidence that the presence of a remuneration committee leads to stronger pay for performance sensitivity.

Study	Year	Period	Setting	Size	Pay Examined		Scope of Study and Key Findings
					Level	Performance	
Bonet and Conyon	2005	2002	UK	504	✓		▪ Examines the relation between remuneration committee composition and directors' remuneration. ▪ Insiders on the committee is associated with higher remuneration.
Johnston	2007	1996	UK	220	✓		▪ Examines the association between market forces and internal controls on the remuneration contracting process. ▪ The appointment of executives to the remuneration committee is not associated with opportunistic behaviour. ▪ The appointment of at least three non-executive directors to the committee is associated with lower levels of CEO remuneration.
Gregory-Smith	2009	1996 - 2005	UK	290	✓		▪ Examines the remuneration committee and CEO influence on the remuneration contracting process. ▪ The composition of the remuneration committee does not affect CEO remuneration. ▪ Remuneration committee independence is not associated with lower levels of remuneration, however a greater proportion of executive directors appointed to the remuneration committee is associated with lower levels of remuneration.

Study	Year	Period	Setting	Size	Component Examined		Scope of Study and Key Findings
					Level	Performance	
Sapp	2008	2000-05	Canada	416	✓	✓	▪ Examines the role of corporate governance mechanisms in the remuneration arrangements of the CEO and top five executives. ▪ Remuneration committee independence and the appointment of the CEO to the committee are associated with higher remuneration. ▪ Performance based equity component represents a larger proportion of CEO remuneration when remuneration committee is independent and the CEO is a member of the committee.
Lawrence and Stapledon	1999	1995	Australia	100	✓	✓	▪ Examines whether board structure and remuneration committee composition influences the remuneration of the CEO. ▪ Less independent remuneration committees are not associated with higher CEO remuneration. Independent remuneration committees are not associated with a stronger pay for performance sensitivity.

Study	Year	Period	Setting	Size	Component Examined		Scope of Study and Key Findings
					Level	Performance	
Windsor and Cybinski	2009	2001	Australia	123	✓	✓	▪ Examines the remuneration committee and CEO remuneration. ▪ Remuneration committees in large companies are more effective at moderating CEO remuneration, however remuneration committees in small companies are not effective moderators of CEO remuneration.
Capezio, Shields and O'Donnell	2011	1999 - 06	Australia	663	✓	✓	▪ Examines the relation between board structure, remuneration committees on CEO cash remuneration. ▪ Independent remuneration committees are more likely to award higher remuneration to the CEO. Independent committees are not associated with greater pay for performance alignment.

The US research stream provides mixed evidence in this regard. Newman and Wright (1995) examine 161 large US companies in 1993. They find that non-independent remuneration committees were associated with higher CEO remuneration. In particular they report the appointment of at least one executive, or otherwise affiliated director, results in higher levels of CEO remuneration. This suggests that a lack of committee independence impedes the monitoring of remuneration, resulting in rents capture.

Daily et al. (1998) examine executive remuneration for 194 Fortune 500 US companies between 1991 and 1994. The study is one of the earliest US longitudinal studies to specifically focus on the role of the remuneration committee in the executive remuneration contracting process. The components of executive remuneration analysed by the study are total CEO remuneration, changes in CEO remuneration and the structure of CEO remuneration. Company size, company performance, ownership structure, CEO tenure and prior year remuneration were included as controls. Contrary to the findings of Newman and Wright (1995), the authors find no evidence that affiliated directors, nor the appointment of the CEO to the remuneration committee result in higher levels of CEO remuneration. They also report that prior year remuneration and company size are positively associated with the CEO's remuneration.

Newman and Mozes (1999) examine whether composition of the remuneration committee affects the total remuneration awarded to the CEO in 161 Fortune 250 US companies in 1992. Consistent with extant research, company size, company performance, ownership characteristics and CEO tenure are used in the regression analysis. They find that the level of total remuneration awarded to the CEO is not related to independence of the remuneration committee. They report that the

appointment of at least one insider to the remuneration committee does not result in a difference in total remuneration when compared against the remuneration awarded by a remuneration committee with no insider members. Company size and company performance are significant determinants of CEO total remuneration. Overall the results of the study are consistent with Daily et al. (1998) and suggest that monitoring of executive remuneration levels is not impeded by a lack of committee independence.

Several US studies were conducted after the introduction of reforms introduced by the Securities and Exchange Commission (SEC) and Internal Revenue Code (IRC). The reforms are designed to increase transparency with regard to executive remuneration and limit the power of executives to influence their own remuneration (Finegold et al., 2007). In 1992, the SEC adopted executive disclosure rules (Release No. 33-6962) which required US listed companies to disclose all forms of executive remuneration, a comparison of remuneration and stock performance and an explanation for incentive-based remuneration. Additionally, in 1993 IRC Rules (s162 (m)) were introduced which disallow tax deductibility where any of the top five executives' remuneration exceeds $1 million unless the remuneration is performance-based and approved by an independent remuneration committee. The reforms recognise that the formation of a remuneration committee is key to ensuring an appropriate, transparent and robust remuneration framework (Vafeas, 2003).

Anderson and Bizjak (2003) investigate the association between remuneration committee composition and the CEO remuneration contracting process of 110 US companies listed on the New York Stock Exchange between 1985 and 1998. The sample is partitioned into two time periods reflecting pre-regulation and post-regulation. The study examines whether changes in regulation affect executive remuneration

oversight and practice. The study controls for company size, performance, risk, company growth, CEO tenure, change in CEO, founder shareholders and industry effects. They find that the regulation did result in increased independence of remuneration committees. However, the results indicate that remuneration committee independence does not significantly affect the level of CEO remuneration, measured as the sum of salary and bonuses, nor the overall structure of CEO remuneration. Anderson and Bizjak (2003) conclude that the appointment of insiders or the CEO to the committee does not result in rent capture. Overall, the study suggests that introducing rules mandating committee independence does not necessarily lead to more optimal executive remuneration practices.

Vafeas (2003) examines the relation between the composition of the remuneration committee and CEO remuneration for 271 large US companies between 1991 and 1997. The study analyses three components of the CEO's remuneration, cash remuneration (salary and bonuses), long term incentive remuneration and total remuneration. CEO age, CEO tenure, ownership characteristics, company size and performance are used as controls. He finds no association between the presence of insiders on the remuneration committee and CEO remuneration levels. The results suggest that CEO tenure and company performance are associated with CEO remuneration levels. Overall Vafeas (2003) suggests that the evidence does not provide strong support that the reforms achieved the desired outcome.

Conyon and He (2004) analyse the relation between remuneration committee composition and CEO remuneration in a sample of 455 *newly listed* US companies between 1998 and 2001. The study incorporates a three tier hierarchical model to operationalise the hypotheses, instead of the traditional principle-agent contracting

model. Total CEO remuneration and total CEO equity incentives are the components of CEO remuneration analysed by the study. Controls used in the study are CEO characteristics, board structure and company economic characteristics. They find no evidence of rent capture, that is the presence of insiders on the remuneration committee is not associated with higher CEO remuneration levels. The results also indicate that if a remuneration committee member is also a significant shareholder the level of remuneration awarded to the CEO is lower. Board size, company size and volatility are positively associated with remuneration levels, whilst growth is negatively associated with remuneration levels awarded to the CEO.

Overall, the studies focusing on the introduction of the SEC and IRR rules suggest that the monitoring of executive remuneration levels is not impeded by a lack of committee independence.

Sapp (2008) examines the relation of a range of corporate governance mechanisms on the remuneration arrangements in 400 Canadian companies between 2000 and 2005. Sapp (2008) extends the literature by directly examining the remuneration arrangements of the wider executive team. Few studies examine the remuneration arrangements beyond the CEO. Controls used in Sapp's (2008) study are company size, performance and industry effects. He finds that remuneration committee independence and the appointment of the CEO to the remuneration committee are associated with higher levels of remuneration awarded to the CEO and key executives. The association is more pronounced in relation to the CEO's remuneration. The results also indicate that CEO and to a lesser extent other key executive remuneration levels are positively associated with company size. Industry effects are also relevant to the level of remuneration awarded to the CEO and key executive team.

Whilst the US institutional setting has mandated the use of independent remuneration committees, the literature provides mixed evidence as to whether these committees moderate the level of remuneration award to the CEO. Of the studies reviewed, only one considers the relation between the remuneration committee and remuneration of executives other than the CEO. Whether independent remuneration committees are effective moderators of the level of remuneration awarded to other executives remains an unanswered question.

Although the UK institutional setting differs to the US, UK research has also produced mixed evidence as to the efficacy of independent remuneration committees. A number of the studies use the remuneration of the highest paid director to proxy for CEO remuneration. Over time, the research has adopted an increasingly rigorous approach to examining the association between remuneration committees and remuneration.

Main and Johnston (1993) examine the characteristics associated with disclosure of the presence of a remuneration committee, the composition of these committees and their influence on remuneration. The study analyses 220 large UK listed companies in 1990. The study examines a period where the voluntary disclosure of the presence of a remuneration committee is new in the UK setting. The study was one of the first UK studies to examine the composition and operation of the remuneration committee. Due to lack of transparency in the disclosure of executives' remuneration during the sample period, the study investigates the remuneration of the highest paid director. Main and Johnston (1993) suggest that in UK companies the highest paid director is either the Chairperson, CEO or managing director.

The study examines total remuneration as disclosed in the annual financial report. Main and Johnston (1993) find the existence of a remuneration committee is associated with higher remuneration. Company size, performance and ownership characteristics are incorporated into the study. They also show that appointment of the highest paid director to the remuneration committee does not result in opportunistic behaviour. Further, they find that a larger proportion of non-executive directors being appointed to the remuneration committee does not constrain the remuneration of the highest paid director. The results indicate that remuneration committees are not effective at constraining executive remuneration.

Three longitudinal studies examined the association between the presence and composition of the remuneration committee on executive remuneration between 1988 and 1994. Conyon (1997) uses panel data analysis from 1988 to 1993 to consider the relation between director remuneration, company size and corporate performance; and the existence of a remuneration committee and executive remuneration for 213 UK companies. The data related to remuneration committee operation were obtained via a survey instrument sent to 1,000 of the largest UK companies. The final sample of 213 companies are listed companies. The study examines the total remuneration, excluding the value of options awarded, of the highest paid director. They find that the existence of a remuneration committee is associated with a slower growth in director remuneration in some circumstances. The results also indicate that prior year remuneration and company size as opposed to shareholder returns are important determinants of future remuneration awarded to directors. Overall the results provide some evidence that monitoring of executive remuneration is more robust when an independent remuneration committee is constituted.

Conyon and Peck (1998) also use panel data to examine the association of board structure and remuneration committees on remuneration between 1991 and 1994. The sample consists of 342 data points related to 94 large publicity listed UK companies. Consistent with Main and Johnston (1993) and Conyon (1997) the remuneration data focuses on the highest paid director, as disclosure of other executives' remuneration was not required during the sample period. The components of remuneration examined by the study are total salary and bonuses. They find that the presence of a remuneration committee is associated with higher levels of remuneration. They report that remuneration committees with a higher proportion of non-executive directors appointed is also associated with higher levels of remuneration. The results suggest that neither remuneration committee presence nor its independence constrains executive remuneration.

Benito and Conyon (1999) also use panel data to examine (1) the relation between directors' cash remuneration and shareholder return; (2) whether the pay for performance sensitivity in directors' cash remuneration has varied over time; and (3) the relation between the company's corporate governance mechanisms and directors' remuneration. Consistent with Conyon and Peck (1998), the cash remuneration analysed is the director's salary and bonuses. The governance mechanisms analysed are the separation of the roles of CEO and Chairman and the adoption of nomination and remuneration committees. Benito and Conyon (1999) use survey data to examine the relation between these corporate governance mechanisms and directors' remuneration in 211 UK companies. The survey data adds new insight into governance mechanisms employed by UK companies as this information was not generally available. Overall

they find that these governance mechanisms do not significantly influence the cash remuneration of directors.

Bonet and Conyon (2005) use panel data to examine the relation between remuneration committees and directors' remuneration in 504 listed UK companies in 2002. The sample is drawn from the entire population of listed UK companies. They note that the sample is the largest and most comprehensive to date. The study examines three components of executive remuneration, total remuneration, the value of options exercised and the proportion of the executives' remuneration that is bonus-based. Their findings indicate that the appointment of insiders to the remuneration committee results in higher CEO remuneration levels.

Johnston (2007) examines whether opportunistic behaviour is constrained by market forces and internal governance mechanisms. The study examines the salary of the highest paid director in 220 large UK companies in 1996. The governance mechanisms examined by the study are the board structure and board committee characteristics that are consistent with the recommendations included in the Cadbury Report (1992), Greenbury Report (1995) and Hampel Report (1998). Company size, performance, industry effects and ownership structure are incorporated into the study. The findings regarding board structure are discussed at section 3.4. The findings related to remuneration committee operation indicate that increasing the number of independent directors on the remuneration committee to at least three is associated with lower levels of executive remuneration. The results also indicate that the appointment of the CEO or executive directors to the remuneration committee does not result in opportunistic salary-setting practices. Company size, performance and industry effects were also positively associated with remuneration levels. Overall despite no evidence of rents

capture, the study provides some evidence that monitoring of executive remuneration is strengthened by committee independence.

Gregory-Smith (2009) uses panel data to examine the remuneration contracting process in 290 UK companies that are members of the FTSE 350 between 1996 and 2005. The study examines the association between board characteristics and the composition of the remuneration committee on CEO remuneration. Gregory-Smith (2009) employs a more stringent test of 'independence' than that used in prior research. Company size, company performance and prior year remuneration are used as controls in the analysis. He finds that neither the composition of the remuneration committee nor its independence significantly affects the remuneration awarded to the CEO. Company size and prior year remuneration are associated with remuneration awarded to the CEO. Overall, the results provide no evidence of rents capture in large UK companies during the sample period.

Although the research has sought to increase the rigour in the models adopted to examine the relation between remuneration committees and executive remuneration levels in UK companies, the research still yields mixed results. Consistent with US research, none of the studies has extended their analysis beyond the CEO or highest paid director. Australian research, although less developed, has followed in a similar vein to the US and UK research streams.

In addition to examining board structure and CEO remuneration, Lawrence and Stapledon (1999) examined the relation between the composition of the remuneration committee and CEO remuneration in 72 of the largest 100 listed Australian companies in 1995. The methodology adopted is consistent with the methodology adopted by Newman and Wright (1995). Lawrence and Stapledon (1999) do not find that less

independent remuneration committees are associated with higher levels of CEO salary and bonuses.

Windsor and Cybinski (2009) analyse a sample of 123 Australian ASX 300 companies in 2001. The study examines whether the associations between CEO remuneration, company size and company performance are moderated by the independence of the remuneration committee. Industry effects are included as a control. They split the sample into three groups based on company size. They find that for larger companies independent remuneration committees are more effective at moderating CEO remuneration. However, their findings in relation to the smaller companies included in the sample suggest that remuneration committees are not effective at managing executive remuneration. Overall, the study suggests that company size is relevant to the overall efficacy of the remuneration committee.

In one of the most comprehensive Australian studies to date, Capezio et al. (2011) examine CEO cash remuneration. The study uses panel data to analyse 4,456 company years covering 663 companies and 1,257 CEOs between 1999 and 2006. Company size, company performance and risk are incorporated into the model. Contrary to expectations, they find that independent remuneration committees are likely to award higher cash remuneration to the CEO and that insider-dominated remuneration committees are likely to award lower levels of cash remuneration to the CEO. Company size is positively associated with CEO cash remuneration. Overall, the Australian research suggests that independent remuneration committees are not always effective at moderating remuneration awarded to company executives.

Overall, neither the US nor the UK evidence provides consistent evidence that remuneration committee independence is an effective moderator of the level of

remuneration awarded to the key executive. The Australian evidence is also mixed in this regard. The level of remuneration awarded is one component of the executive remuneration equation. The following section reviews studies that have analysed the role of the remuneration committee in relation to incentive-based component of executive remuneration.

Pay for Performance Sensitivity

In considering whether remuneration committees are effective at aligning the interests of shareholders and managers, prior research has focused on whether remuneration committees are associated with greater sensitivity of remuneration to company performance. Performance based remuneration is considered an appropriate means to align the interests of shareholder and managers, and thereby reduce agency costs (Jensen and Murphy, 1990). Hall and Liebman (1998) argue that corporate assets are not being managed efficiently if there is no meaningful link between executive remuneration, particularly the CEO, and company performance. Regulators in Australia and other jurisdictions promote the use of performance based remuneration for executives.

The relation between CEO remuneration and company performance is the subject of an extensive body of literature. The results of these studies indicate that the association is generally quite weak (Jensen and Murphy, 1990; Clarkson et al., 2006; Capezio et al., 2009; Arthur and O'Neill, 2010; Tian and Twite, 2010). In their meta-analysis of empirical literature regarding CEO pay for performance Tosi et al. (2000) reports that only 5 per cent of the variance in executive remuneration is associated with company performance.

The relation between remuneration and company performance has been considered in a number of Australian studies. Lawrence and Stapledon (1999) do not find a statistically significant relation between CEO remuneration and company performance for the 100 largest Australian companies in 1995. In a study of 722 Australian companies between 1990 and 1999, Merhebi et al. (2006) find that CEO cash remuneration is related to company size and company performance. Clarkson et al. (2006) examined a sample of 48 companies between 1999 and 2004, and report evidence of an increased alignment between remuneration and company performance over the sample period. Arthur and O'Neill (2010) examine executive remuneration for performance linkage of CEO bonus payments in Australia's largest companies between 2005 and 2008 and find no relationship between total cash remuneration and accounting measures of performance. Heaney et al. (2010) analyse 1,144 listed Australian companies in 2006 and do not find any evidence to support an association between CEO remuneration and subsequent company performance. The Australian evidence regarding the pay for performance sensitivity is therefore inconclusive (Heaney et al., 2010).

However, the focus of this thesis is whether adoption of the ASX remuneration committee recommendations is associated with a stronger alignment between remuneration of the top five ranked executives and company performance. As such, the focus is on the role of the remuneration committee in executive remuneration being linked with company performance. Research regarding the influence of remuneration committees on pay for performance is limited (Capezio et al., 2011). The US and UK research streams in this area are more developed than in Australia.

Newman and Wright (1995) report that independent remuneration committees are associated with stronger pay for performance sensitivity in the remuneration awarded to the CEO of 161 large UK companies. The authors note that the result is more pronounced in companies evidencing unfavourable performance.

Newman and Mozes (1999) also examine performing and non-performing companies in their study of US companies. They find that executive remuneration structures are skewed in favour of the CEO when non-independent directors serve on the remuneration committee in certain circumstances. In particular, the study reports that when companies are performing, the appointment of insiders to the remuneration committee does not result in more favourable remuneration. However, in under performing companies, the structure of the remuneration awarded to the CEO is biased towards the CEO where insiders are appointed to the remuneration committee. Overall, the study provides further evidence that the pay for performance sensitivity is strengthened by committee independence, particularly in underperforming companies.

Anderson and Bizjak (2003) find that for a sample of 110 large US companies between 1985 and 1998, remuneration committee independence is not associated with improved alignment between CEO remuneration and company performance. Contrary to expectations, they find no evidence that when the CEO is appointed to the committee lower pay for performance incentives are awarded to the CEO. Overall they suggest that the mandating of remuneration committee independence may not lead to more effective remuneration contracts.

The Vafeas (2003) study of 500 US companies between 1991 and 1997 finds no association between the presence of insiders on the remuneration committee and CEO remuneration sensitivity. Recall the study examines the changes in the SEC rules in

1992 and the Internal Revenue Rules which sought to improve the efficiency of the executive remuneration contracting process. The sample is then split between pre-regulation and post-regulation. In these tests, Vafeas (2003) finds that remuneration committees with insiders appointed prior to the change in regulation award more favourable remuneration structures to the CEO, and the pay for performance sensitivity in CEO remuneration is stronger following the changes in the regulation. Overall Vafeas (2003) suggests that the evidence does not provide strong support that the reforms achieved the desired outcome.

Conyon and He (2004) analyse 455 *newly listed* US companies between 1998 and 2001. They find no evidence that the presence of insiders on the remuneration committee are associated with lower levels of incentive-based remuneration. CEO age CEO tenure, CEO duality and company growth are positively associated with CEO equity incentives, whilst board size, insiders appointed to the board and company size are negatively associated with equity incentives awarded to the CEO. The results also indicate that if a remuneration committee member is also a significant shareholder, the CEO's remuneration includes a higher component of performance based equity incentives.

The studies reviewed above have focused on independent versus non-independent remuneration committees. The logic being that independence is a proxy for remuneration committee quality. The following two studies develop a more comprehensive proxy for remuneration committee quality rather than focusing solely on committee independence. Sun and Cahan (2009) examine the relation between remuneration committee quality, CEO cash remuneration and company performance in 812 US companies in 2001. Each company included in the sample had constituted a

fully independent remuneration committee. They extend the literature by introducing a multi-faceted measure of remuneration committee quality. A composite score based on six characteristics reflecting remuneration committee efficacy is developed to measure the overall quality of the remuneration committee. The measures incorporated into the composite score are the proportion of committee members appointed by the CEO, committee members' years of expertise, the proportion of committee members that are also the CEO of another company, the number of board positions held by committee members, the committee members' shareholding in the company, and committee size.

Sun and Cahan (2009) find that despite requirements that remuneration committees be independent, the relation between remuneration committee quality and pay for performance sensitivity of CEO cash remuneration varies between companies on a cross-sectional basis. In companies with a high quality remuneration committee, the cash remuneration awarded to the CEO reflects stronger pay for performance sensitivity. However, in high growth companies and loss making companies, remuneration committee quality is associated with weaker pay for performance sensitivity in cash remuneration. The results also indicate that company performance is positively associated with CEO cash remuneration.

Sun et al. (2009) extend the above line of research to consider the relation between remuneration committee quality, stock options awarded to the CEO and future company performance in 474 listed US companies in 2001. They find that high remuneration committee quality is associated with more effective incentives incorporated into the remuneration structure awarded to the CEO which result in higher subsequent company performance. Overall the study shows that a high quality

remuneration committee results in greater alignment between CEO incentives and shareholder interests.

In his examination of Canadian companies Sapp (2008) examines the wider executive team. He reports the equity component represents a larger proportion of the CEO's remuneration in Canadian companies when the remuneration committee is independent and the CEO is not a member of the remuneration committee.

Overall, the US research provides mixed evidence regarding the efficacy of the remuneration committee. The research identifies that remuneration quality varies on a cross-sectional basis and that remuneration committee quality is associated with stronger pay for performance sensitivity in remuneration awarded to the CEO. Research into the pay for performance sensitivity in UK companies has also yielded mixed results. Consistent with the US research, the UK research focuses on the CEO.

The Main and Johnston (1993) study of 220 UK companies in 1990 finds the existence of a remuneration committee is not associated with stronger pay for performance alignment. Conyon and Peck's (1998) analysis of 100 UK companies between 1991 and 1994 finds that independent remuneration committees lead to a stronger pay for performance sensitivity in the remuneration awarded to the highest paid director. Overall the results of this study suggest that the alignment of executive remuneration with company performance is enhanced by independent remuneration committees. Benito and Conyon (1999) examine 211 UK companies between 1985 and 1994 and report weak evidence that independent remuneration committees are associated with stronger pay for performance sensitivity over the sample period.

The Australian evidence on remuneration committees and executive incentives is sparse. Lawrence and Stapledon (1999) analyse 100 large companies in 1995 and report that independent remuneration committees are not associated with stronger pay for performance sensitivity in the remuneration awarded to the CEO. Windsor and Cybinski (2009) examine the relation between remuneration committees, CEO remuneration, company size and company performance for 123 of the largest Australian companies in 2001. Their sample is split into three groups based on company size. They find that independent remuneration committees are more effective at linking bonuses paid to the CEO with company performance in larger and medium sized large companies, however, are ineffective in smaller companies.

A study by Capezio et al. (2011) examined the role of the remuneration committee of 663 large companies between 1999 to 2006. They find no evidence that independent remuneration committees are associated with better alignment of total CEO cash remuneration to company performance. In particular, the non-incentive component of CEO cash remuneration is higher in companies that constitute an independent remuneration committee. The results also indicate that the pay for performance sensitivity of CEO remuneration is not related to company performance, company size or company risk factors.

A number of points can be synthesised from the discussion of prior research. A large component of the research is US and UK based, with samples generally focusing on large companies. A significant portion of the research stream has focused on CEO remuneration as opposed to the CEO and top tier executives. Generally it can be seen that the remuneration committee as a corporate governance mechanism employed to strengthen the alignment of shareholder and manager interests in the context of

executive remuneration arrangements has yielded mixed results. No Australian study has examined the influence of adoption of the ASX remuneration committee recommendations on executive remuneration. Consequently, questions regarding the structure and efficacy of the remuneration committee, particularly in the Australian context remain open. These issues are explored in this thesis.

Shareholder Dissent on Executive Remuneration

As outlined in Chapter 2, one of the most recent regulatory initiatives for executive remuneration is the introduction of binding or non-binding shareholder vote on company remuneration arrangements (Conyon and Sadler, 2010). The vote provides an opportunity for shareholders to express their satisfaction or otherwise with remuneration contracts devised by the board and the remuneration committee. A significant vote against the remuneration report is tantamount to a no confidence vote on executive remuneration arrangements (Conyon and Sadler, 2010). That is, a negative vote on remuneration arrangements indicates a failure by the board and its remuneration committee to satisfy shareholders that remuneration contracts are appropriately aligned with the interests of shareholders. Accordingly, this thesis incorporates the shareholder vote as an additional measure of remuneration committee effectiveness.

As the non-binding shareholder vote is a more recent regulatory mechanism, empirical research in this regard is limited (Dew-Becker, 2009). Most of the significant studies to date have been conducted using data from the UK. Regulation requiring shareholders to vote on the company remuneration report was first introduced in the UK in 2002, and Australia introduced similar regulation in 2005 (Hemphill and Lillevik, 2009). None of the existing studies specifically focus on the remuneration committee.

Ferri and Mauber (2009) conducted one of the first studies to consider the shareholder advisory vote, which was an event study that investigated CEO cash remuneration and total director remuneration in 600 UK companies before and after the introduction of the shareholder advisory vote. After controlling for other determinants of executive remuneration related to company performance and size, they find the level and growth of CEO cash remuneration is not sensitive to shareholder dissent. However, they did find that after the introduction of the non-binding vote, the sensitivity of the pay for performance linkage in CEO cash and total remuneration, particularly components shareholders perceive as rewarding failure, increased. Whilst the sensitivity of CEO remuneration to poor performance was more pronounced in companies that received a higher proportion of shareholder dissent on the non-binding vote, there is evidence that in some circumstances companies react to the threat of shareholder dissatisfaction regarding these arrangements. The results indicate that shareholder dissent is largely associated with remuneration perceived as excessive as opposed to high. The results suggest that the introduction of the non-binding shareholder vote results in a stronger pay for performance alignment in the remuneration awarded to the CEO.

Carter and Zamora (2009) extend the literature by examining the relation between the shareholder non-binding vote and changes in the structure of CEO remuneration in 1,669 CEO years of 410 FTSE 350 UK companies during the period from 2002 to 2006. In particular, their study seeks to identify the components of CEO remuneration associated with shareholder dissent and whether companies respond to shareholder dissent by altering the remuneration arrangements of the CEO. Carter and Zamora (2009) find that shareholders generally disapprove of excessive salaries and weak pay

for performance sensitivity in bonus structures. The results indicate shareholders are sensitive to equity remuneration structures that have the capacity to significantly dilute shareholder interests. They also report that companies that receive higher levels of shareholder dissent amend the CEO's salary quicker than companies where the dissent is not as high. The results also suggest that bonuses and the award of equity grants are subsequently reduced in companies that receive the highest level of shareholder dissent. Overall the study provides further evidence that the introduction of the non-binding shareholder vote influences CEO remuneration arrangements in UK companies.

Conyon and Sadler (2010) further extend the literature by analysing 44,787 shareholder annual resolutions between 2002 and 2007. The study examines a range of shareholder resolutions, and is therefore not limited to a review of the non-binding shareholder vote. Of relevance to this thesis is that the study examines whether shareholder dissent is associated with CEO cash remuneration and whether CEO cash remuneration is altered after receiving high levels of shareholder dissent on the annual remuneration report. Conyon and Sadler (2010) report that companies generally receive a low level of shareholder dissent on the annual remuneration report, with the average level of shareholder dissent recorded at between 7 and 10 per cent. Despite the low levels of dissent recorded on the annual remuneration report, they note that the highest level of dissent across a range of shareholder resolutions relates to the vote on the annual remuneration report. Conyon and Sadler (2010) find that excessive cash remuneration is more likely to attract a negative shareholder response. The results indicate that higher levels of shareholder dissent are not necessarily associated with lower CEO cash remuneration in subsequent periods.

Overall, the studies on UK companies provide evidence that shareholders use their vote on the annual remuneration report to signal their dissatisfaction with executive remuneration arrangements.

Deane (2007) reports that there has been no empirical research regarding the operation of the Australian non-binding shareholder vote to date. However, one Australian study examining the relation between executive remuneration disclosure, the pay for performance sensitivity of executive remuneration and shareholder oversight has subsequently been published by Clarkson et al. (2011). Whilst the study does not directly examine the remuneration committee, it does provide insight into the operation of the non-binding vote.

Clarkson et al. (2011) examine whether enhanced executive remuneration disclosure requirements and the non-binding shareholder vote result in a perceived improvement in the pay for performance sensitivity in CEO remunerating arrangements in 240 Australian listed companies between 2001 and 2009. The study focuses on shareholder *perception* of total reported remuneration of the CEO. They find that the introduction of increased oversight by shareholders has improved the pay for performance sensitivity in CEO remuneration arrangements over the sample period.

Clarkson et al. (2011) report that strengthening of the company's governance structure, measured by board independence, CEO and board chairperson duality, presence of a remuneration committee and the appointment of the CEO to the remuneration committee, plays a limited or insignificant role in the oversight of executive remuneration arrangements. Company size, audit quality, and company risk are positively associated with CEO remuneration arrangements, whist leverage and change in CEO is negatively associated with CEO remuneration arrangements.

Overall, the study provides preliminary evidence that the non-binding shareholder vote influences the pay for performance sensitivity of CEO remuneration arrangements in Australian listed companies.

The UK and Australian evidence suggests that shareholders use the non-binding vote on the annual remuneration report to signal their dissatisfaction with executive remuneration arrangements. The evidence also indicates that components of remuneration awarded to the CEO are sensitive to the non-binding vote in some circumstances. In each jurisdiction the empirical evidence to date is limited. Consequently, further research is required to determine the impact of the non-binding shareholder vote on executive remuneration contracts.

Whilst the studies have examined the sensitivity of remuneration arrangements of the CEO to the non-binding vote, none of the studies examined have directly examined the relation between the non-binding shareholder vote and the remuneration committee. Similarly, they have not considered the remuneration of the wider executive team. The annual remuneration report, on which the vote is based, includes disclosure of the remuneration arrangements of key executives, not just the CEO. Therefore a broader understanding as to shareholder satisfaction or dissatisfaction with the remuneration arrangements of the key executive team has not been examined in extant research. This thesis addresses these gaps in the literature.

3.6 SUMMARY

This chapter reviews literature relevant to the structure and efficacy of remuneration committees. The ASX Recommendations focus on the use of remuneration committees, and particularly independent remuneration committees, to ensure companies adopt responsible remuneration practices. Whilst theory suggests that independent remuneration committees are a response to agency issues related to executive remuneration, extant literature does not directly assess whether remuneration committee formation and composition is a reflection of agency costs.

Research as to whether remuneration committees are associated with more effective remuneration practice is limited and has largely yielded mixed results. Importantly, extant research tends to focus on periods prior to the implementation of the ASX Recommendations, resulting in a lack of research regarding the effectiveness of adoption of the ASX remuneration committee recommendations. This is of particular relevance given the introduction in 2011 of mandated rules regarding remuneration committee formation and composition for large Australian companies.

In addition, existing research concentrates on the remuneration awarded to the CEO in large companies. As the remuneration committee provides advice regarding company remuneration practice, research regarding the role of the remuneration committee is required. Therefore, in assessing committee efficacy it is relevant to consider the remuneration of a broader group of senior executives across a range of company sizes.

Research on the non-binding shareholder vote on the annual remuneration report is also sparse. A search of the literature located one empirical study that has examined the non-binding vote in Australia. The research has also focused on the relation between

the non-binding vote and the CEO's remuneration arrangements, as opposed to the wider executive team. Additionally, extant research does not directly assess the relation between the remuneration committee and the shareholder non-binding vote. Therefore a broader understanding as to shareholder satisfaction or dissatisfaction with the remuneration committee's oversight of the remuneration arrangements of the key executive team has not been examined in detail in prior research.

The next chapter develops hypotheses to operationalise the research questions outlined in Chapter 1, which seek to address the limitations identified in the review of prior literature as discussed in this chapter. The development of the hypotheses draws on the research reviewed in this chapter and the broader governance and executive remuneration research streams.

4. HYPOTHESES DEVELOPMENT

4.1 INTRODUCTION

This chapter develops testable hypotheses for the research questions identified in Chapter 1. Prior literature discussed in Chapter 3 shows that committee composition is systematically related to various factors. That is, some directors are more likely to be appointed than others. In the US, regulatory intervention has resulted in more independent remuneration committees. There is evidence of this being beneficial in terms of appropriate remuneration (i.e. greater pay for performance sensitivity, lower levels of remuneration and smaller increases over time). There are also tensions. CEO power is negatively associated with committee independence. Also, there is evidence that board monitoring results in committee membership that protects shareholder interests. Overall, however, there is no clear evidence as to the extent of appropriate decisions regarding committee formation.

Recall that the first research question is concerned with the decision to form a remuneration committee, and to adopt the ASX remuneration committee recommendations regarding its composition. The next research question is concerned with the association between adoption of the ASX remuneration committee recommendations and executive remuneration practice. The third research question examines the association between adoption of the ASX remuneration committee recommendations and shareholder dissent on the annual remuneration report:

The chapter proceeds as follows. Section 4.2 outlines the hypotheses related to remuneration committee formation and composition. Section 4.3 outlines the hypothesis

related to remuneration committee operation. A summary of the chapter is included at section 4.4.

4.2 REMUNERATION COMMITTEE FORMATION AND COMPOSITION

The first research question addresses the decision to form a remuneration committee and the choice of its composition:

> **Research Question 1a:** Why do companies form a remuneration committee?
>
> **Research Question 1b:** For companies that form a remuneration committee, what factors determine adoption of the ASX remuneration committee composition recommendations?

The ASX recommends the formation of a remuneration committee, and for it to be of adequate size and independence, so that it can provide adequate monitoring of executive remuneration (ASX Corporate Governance Council, 2007, Principle 8). If the board provides monitoring of committee composition to the benefit of shareholders, then an association between agency costs and composition is to be expected. Several prior empirical studies show a positive association between external demand for monitoring of executives and agency costs (Cui et al., 2007; Rainsbury et al., 2008). Therefore, the decisions made by a company regarding formation and composition of the remuneration committee are likely to be positively associated with agency costs and the related external demand for monitoring. Theoretical (Jensen and Meckling, 1976; Fama and Jensen, 1983) and empirical (Eisenhardt, 1989; Ward et al., 2009) studies identify that agency costs arise when the interests of shareholders and managers diverge and managers seek to maximise their personal wealth rather than the value of the company.

The demand for monitoring increases as agency costs increase (Jensen and Meckling, 1976).

Prior studies identify that corporate governance mechanisms are related to the level of agency problems experienced by the company (Dey, 2008). This thesis focuses on the formation and composition of the remuneration committee as a mechanism to reduce agency problems associated with executive remuneration arrangements. Therefore it is expected that the demand for adoption of the ASX remuneration committee recommendations is associated with the level of agency costs experienced by the company.

Prior research identifies numerous measures of agency costs. These include patterns of share ownership, organisational complexity, growth, free cash flows, leverage and company size (Brick et al., 2006; Boone et al., 2007; Coles et al., 2008; Dey, 2008; Linck et al., 2008; Lehn et al., 2009). A discussion of these agency costs and their relevance to the formation and composition of the remuneration committee follows.

Patterns of shareholding have been shown in prior research to be associated with agency costs. Companies with widely dispersed share ownership have greater separation between equity holders and management of the company. In this situation, management has significant power over the use of company resources (Bebchuk and Fried, 2003). Dispersed share ownership therefore increases the capacity of executives to act opportunistically and secure favourable remuneration contracts at the expense of the company. This results in greater demand for monitoring of management (Cotter and Silvester, 2003; Dey, 2008; Sapp, 2008; Aguilera and Cuervo-Cazurra, 2009). Therefore, it is expected that the demand for companies to adopt the ASX remuneration

committee recommendations is greater when the shareholding of the company is widely dispersed.

Prior research has found that substantial ownership of shares by managers is likely to result in a better alignment of the interests of managers and the company, thereby reducing agency costs (Jensen and Meckling, 1976; Jensen, 1993; Singh and Davidson, 2003; McKnight and Weir, 2009). However, CEO shareholding has been found to be associated with increased influence of the CEO over the decision-making and structure of the board of directors (Linck et al., 2008). This influence extends to board decision-making regarding remuneration contracts (Ryan and Wiggings, 2004) and remuneration committee appointments (Newman, 2000; Weisbach, 2007). Doukas (2007) finds that high levels of equity ownership by officers and directors (also referred to as *insiders*) are associated with high agency costs, because of entrenchment problems. Consequently, it is expected that companies with higher insider shareholding have higher agency costs and experience greater demand to adopt the ASX remuneration committee recommendations.

The level of institutional shareholding has also been found to be relevant to agency costs associated with executive remuneration. Institutional shareholders actively monitor company operations and have influence over management and board decisions (Bathala and Rao, 1995; David et al., 1998; Carson, 2002; Krishnan and Zhongxia, 2005; McKnight and Weir, 2009). It is expected that institutional investors with high shareholdings in investee companies expect these companies to evidence strong corporate governance. The demand for an effective remuneration committee to reduce the agency costs associated with executive remuneration is more likely to come from institutional investors (Carson, 2002). Therefore, it is expected that companies with

higher levels of institutional shareholding experience greater pressure to adopt the ASX remuneration committee recommendations.

The discussion above identifies an expected association between certain shareholding characteristics and an increase in external demand for the company to adopt the ASX remuneration committee recommendations. This leads to hypotheses 1a, 1b and 1c as follows:

H1a: Companies with more widely dispersed shareholding adopt the ASX remuneration committee recommendations.

H1b: Companies with greater management share ownership adopt the ASX remuneration committee recommendations.

H1c: Companies with higher institutional shareholding adopt the ASX remuneration committee recommendations.

CEO entrenchment has been found to influence executive remuneration and remuneration committee practice (Vafeas, 2003; Sapp, 2008). Ryan and Wiggins (2004) suggest that CEO entrenchment indicates significant agency issues in board governance. Evidence suggests an entrenched CEO has greater influence over company remuneration practices and the composition of the remuneration committee (Hermalin and Weisbach, 1988; Newman, 2000; Ryan and Wiggins, 2004). It is expected that CEO entrenchment is associated with greater demand for the company to adopt the ASX Recommendations, leading to Hypothesis 2.

H2: Companies with CEO entrenchment adopt the ASX remuneration committee recommendations.

Agency costs have been found to increase with the complexity of company operations (Bushman et al., 2004; Boone et al., 2007). More complex operations increase the potential for information asymmetry between managers and shareholders, resulting in a greater need for effective monitoring of managers by the board of directors (Doukas et al., 2000; Bushman et al., 2004). In addition, the level of executive remuneration increases and executive remuneration contracts are more difficult to negotiate (Gomez-Mejia et al., 1987) as the company becomes more complex. Hence, as company complexity increases it is expected that the demand for executive remuneration oversight increases, leading to Hypothesis 3:

H3: Companies with greater complexity adopt ASX remuneration committee recommendations.

Other company characteristics such as company growth opportunities, free cash flow and asset turnover have been associated with agency costs. High company growth increases managerial power and is associated with greater levels of information asymmetry (Jensen, 1986). High growth companies have greater demand for effective monitoring of management because the operating environment makes it difficult to determine the appropriateness of management decisions (Smith Jr and Watts, 1992). Further, empirical evidence suggests that companies with high growth are more likely to use equity incentives in remuneration contracts in an attempt to focus managers on shareholder outcomes (Gaver and Gaver, 1995; Mehran, 1995; Himmelberg et al., 1999; Palia, 2001). Consequently, companies exhibiting high growth have greater demand for adoption of the ASX remuneration committee recommendations.

Jensen (1986) shows that divergence between manager and shareholder interests is likely to be greater when a company has substantial free cash flows. A cash holding in excess of investment and operating requirements increases the likelihood that managers make sub-optimal investments rather than provide a return to shareholders as dividends (Jensen, 1986). Therefore, companies with substantial free cash flows have higher agency costs (Jensen, 1986; McKnight and Weir, 2009). In relation to remuneration, surplus cash means it is more likely that managers attempt to opportunistically increase their wealth through inefficient remuneration contracts. Therefore the demand for effective oversight of executive remuneration is expected to increase in these companies.

Asset turnover is incorporated into the study on the basis that lower asset turnover is associated with higher agency costs (Singh and Davidson, 2003; Florackis, 2008). Companies with higher asset turnover are associated with utilising the company's assets in a manner that creates shareholder value, while conversely, companies experiencing lower asset turnover are associated with inefficient use of the company's assets and opportunistic behaviour by management (Singh and Davidson, 2003; Florackis, 2008). It is therefore expected the companies evidencing lower asset turnover have higher agency costs and greater demand for adoption of the ASX remuneration committee recommendations. The discussion in the preceding paragraphs leads to Hypotheses 4a, 4b and 4c.

H4a: High growth companies adopt the ASX remuneration committee recommendations.

H4b: Companies with greater free cash flows adopt the ASX remuneration committee recommendations

H4c: Companies with lower asset turnover adopt the ASX remuneration committee recommendations.

Apart from external demand for strong governance created by agency costs, the implementation of governance mechanisms is also related to the capacity of a company to adopt the recommendations and the costs of adoption. The ASX recommends formation of a remuneration committee with a minimum of three members, a majority of which are independent directors, and the chairperson should be independent (ASX, 2007: Recommendation 8.1). The ability of a company to adopt these specifications for the committee is limited by board size and the number of independent directors on the board (Klein, 2002; Rainsbury et al., 2008; Huang et al., 2009).

Constraints arise when there is a limited supply of potential committee members for the remuneration committee. Moreover, it is costly for a company to appoint additional board members or reconfigure the board so as to enable adoption (Linck et al., 2008). The remuneration committee formation and composition decision is therefore a matter of balancing the benefits of monitoring provided by the committee and the costs of adoption of the recommendations.

The implementation of governance mechanisms is also related to the capacity of a company to adopt recommendations regardless of external demand created by agency costs. Optimal governance occurs when the choice of governance mechanisms properly balances marginal benefits and marginal costs (Agrawal and Knoeber, 1996). The ability of a company to adopt these specifications for the committee is limited by board size and the number of independent directors on the board (Klein, 2002; Rainsbury et al., 2008; Huang et al., 2009).

Consequently, board capacity is expected to be related to adoption of ASX remuneration committee recommendations. The discussion leads to Hypotheses 5a and 5b:

H5a: Companies with larger board size adopt the ASX remuneration committee recommendations.

H5b: Companies with a higher proportion of independent directors adopt the ASX remuneration committee composition recommendations.

4.3 REMUNERATION COMMITTEE EFFECTIVENESS

4.3.1 Remuneration Levels and Pay for Performance Sensitivity

The next research question is concerned with the association between adoption of the ASX remuneration committee recommendations and remuneration practice:

> **Research Question 2:** Does adoption of the ASX remuneration committee recommendations influence the level of executive remuneration and the linkage to company performance in remuneration awarded to key executives?

Prior research suggests that weak overall corporate governance is associated with excessive remuneration (Core et al., 1999; Brick et al., 2006; Sun and Cahan, 2009). Excessive executive remuneration is often cited as evidence of decision-making failure by the board and the remuneration committee (Conyon, 2011). This suggests that an independent board committee should make better decisions with regard to executive remuneration. The ASX suggests that appropriate remuneration is structured in a way that motivates executives to focus on the company's long term growth and success, and

that the level and structure of the remuneration contract should be reasonable and performance-based (ASX Corporate Governance Council, 2007). Consequently, the remuneration committee should ensure executive remuneration contracts provide for appropriate levels of remuneration and incorporate appropriate linkage to company performance.

Despite the theoretical justification for the presence of an independent remuneration committee, empirical evidence to date has provided mixed results. Overall, the US and UK literature suggests that independent remuneration committees are more effective at ensuring the CEO's remuneration arrangements are linked to company performance. However, independent remuneration committees are not effective at constraining the level of remuneration (Newman and Wright, 1995; Conyon and Peck, 1998; Sapp, 2008). Australian evidence suggests that remuneration committees are not effective at constraining the CEO's remuneration nor at ensuring a stronger pay for performance link in the CEO's remuneration arrangements (Lawrence and Stapledon, 1999; Capezio et al., 2011). Recall that none of the Australian studies has examined the association between adoption of the ASX remuneration committee recommendations and remuneration practice. This discussion leads to the following hypotheses:

H6a: Adoption of the ASX remuneration committee recommendations is associated with the level of cash remuneration awarded to key executives.

H6b: Adoption of the ASX remuneration committee recommendations is associated with stronger pay for performance sensitivity in remuneration awarded to key executives.

4.3.2 Shareholder Dissent

Recent regulatory changes have provided for a greater involvement by shareholders in the determination of executive remuneration contracts. In particular, shareholder involvement takes the form of an annual non-binding advisory vote on the company's remuneration report. The aim of the reform is to align the interests of managers and shareholders by ensuring executive remuneration is appropriately aligned with company performance, and to promote shareholder engagement in the area of executive remuneration (Sheehan, 2009).

The non-binding vote provides an opportunity for shareholders to express their satisfaction or otherwise with remuneration contracts and company remuneration practice. Shareholders may also use the non-binding vote to express dissatisfaction with other aspects of the company's management. Krishnan and Ye (2005) show that shareholder voting on company resolutions reflects perceptions of the performance of directors. The final research question is concerned with the relation between adoption of the ASX remuneration committee recommendations and levels of shareholder dissent on the annual remuneration report:

> **Research Question 3:** Is adoption of the ASX remuneration committee recommendations negatively associated with shareholder dissent on the annual remuneration report?

Recall that in Australia, shareholders vote each year to approve the annual remuneration report. A significant vote against the remuneration report is the equivalent of a no confidence vote on company remuneration practices (Ferri and Maber, 2009; Conyon and Sadler, 2010). Moreover, a negative vote is likely to occur if

shareholders consider the remuneration committee to be ineffective. Therefore, the non-binding shareholder vote is determined by how effectively executive remuneration practice is managed. If remuneration is poorly managed and contracts reflect the opportunistic appropriation of wealth by managers, then it is unlikely to secure the approval of shareholders. Companies adopting the ASX remuneration committee recommendations have implemented what is considered *best practice* for executive remuneration oversight. To the extent that this improves the effectiveness of remuneration practice, companies adopting the ASX remuneration committee recommendations are more likely to receive lower levels of shareholder dissent on the annual remuneration report. This discussion leads to Hypothesis 7:

H7: Adoption of the ASX remuneration committee recommendations is associated with less shareholder dissent on the annual remuneration report.

4.4 SUMMARY

Using an agency framework and prior literature, this chapter develops hypotheses to investigate aspects of remuneration committee formation, composition and effectiveness. The next chapter outlines the research methodology used to test the hypotheses outlined above.

5 RESEARCH METHOD

5.1 INTRODUCTION

This chapter outlines the research method used to test Hypotheses 1 to 7 developed in Chapter 4. Hypotheses 1 to 5 focus on determinants of the formation of a remuneration committee, and the adoption of the ASX remuneration committee composition recommendations. Hypotheses 6 and 7 consider the relation between adoption of the ASX remuneration committee recommendations and aspects of executive remuneration practice. Hypothesis 6 examines the relation between adoption of the ASX remuneration committee recommendations and executive remuneration levels and linkage with company performance. Hypothesis 7 examines the relation between adoption of the remuneration committee recommendations and shareholder dissent on the remuneration report. Empirical archival analysis is used to test Hypotheses 1 through 7.

This chapter is presented as follows. Section 5.2 describes the research method and provides the variable specifications used in the analysis of remuneration committee formation and composition. Section 5.3 describes the research method and outlines the variable specifications incorporated in the analysis of remuneration practice. Section 5.4 outlines the sample selection process. Finally section 5.5 provides a summary of the chapter.

5.2 MODEL SPECIFICATION – REMUNERATION COMMITTEE FORMATION AND COMPOSITION

The first part of this thesis examines agency related demand and board capacity as determinants of a company forming a remuneration committee and adopting the ASX remuneration committee recommendations regarding committee composition. Hypotheses 1 to 4 examine agency related demand characteristics, whilst Hypothesis 5 examines board capacity. As Hypotheses 1 to 5 examine the association of adoption of the specific committee characteristics included in the ASX remuneration committee recommendations, logistic regression analysis is used to test the hypotheses. Model 1 examines committee formation and Model 2 examines committee composition. The relationship is expressed in Models 1 and 2 below:

Model 1(Committee Formation):

$$\textit{Remuneration Committee} = \beta_0 + \beta_1 \textit{Ownership Structure} + \beta_2 \textit{Institutional Shareholding} + \beta_3 \textit{Business Segments} + \beta_4 \textit{Geo. Segments} + \beta_5 \textit{CEO Entrenchment} + \beta_6 \textit{Growth} + \beta_7 \textit{Free Cash Flow} + \beta_8 \textit{Asset Turnover} + \beta_9 \textit{Board Size} + \beta_{10} \textit{Company Size} + \beta_{11} \textit{Governance Quality} + \beta_{12} \textit{Leverage} + \beta_{13} \textit{Big4 Auditor} + \beta_{14} \textit{Company Age} + \beta_{15} \textit{Industry} + \varepsilon$$

Where:

Remuneration Committee = Dichotomous variable, coded one (1) if the company has formed a remuneration committee as at 30 June 2008, and zero (0) otherwise.

Ownership Structure (shareholder dispersion and insider shareholding) = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

Business Segments = Number of business segments in which the company operates, as disclosed in the 2008 financial report.

Geo. Segments = Number of geographical segments in which the company operates, as disclosed in the 2008 financial report.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity as at 30 June 2008, winsorised at 1 per cent.

Free Cash Flow = Difference between the gross cash flow from operations less gross investment as at 30 June 2008, winsorised at 1 per cent.

Asset Turnover = Operating revenue divided by average total assets, as at 30 June 2008.

Board Size = Number of directors appointed to the Board as at 30 June 2008.

Company Size = Natural log of total assets, as at 30 June 2008.

Governance Quality = Score determined by adding one point for adoption of nominated ASX governance recommendations as disclosed in the 2008 financial report.

Leverage = Total assets divided by total liabilities as at 30 June 2008, winsorised at 1 per cent.

Big 4 Auditor = Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm as at 30 June 2008, and zero (0) otherwise.

Company Age = The number of years since the company listed on the ASX.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Model 2 (Committee Composition):

$$ASX\ Adopter = \beta_0 + \beta_1 Ownership\ Structure + \beta_2 Institutional\ Shareholding + \beta_3 CEO\ Entrenchment + \beta_4 Business\ Segments + \beta_5 Geo.\ Segments + \beta_6 Growth + \beta_7 Free\ Cash\ Flow + \beta_8 Asset\ Turnover + \beta_9 Board\ Size + \beta_{10} Board\ Independence + \beta_{11} Company\ Size + \beta_{12} Governance\ Quality + \beta_{13} Leverage + \beta_{14} Big4\ Auditor + \beta_{15} Company\ Age + \beta_{16} Industry + \varepsilon$$

Where:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition as at 30 June 2008, and zero (0) otherwise.

Ownership Structure (shareholder dispersion and insider shareholding) = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.

Business Segments = Number of business segments in which the company operates, as disclosed in the 2008 financial report.

Geo. Segments = Number of geographical segments in which the company operates, as disclosed in the 2008 financial report.

Growth = Book value of equity divided by market value of equity as at 30 June 2008, winsorised at 1 per cent.

Free Cash Flow = Difference between the gross cash flow from operations less gross investment as at 30 June 2008, winsorised at 1 per cent.

Asset Turnover = Operating revenue divided by average total assets, as at 30 June 2008.

Board Size = Number of directors appointed to the Board as at 30 June 2008.

Board Independence = Number of independent directors divided by the number of directors as at 30 June 2008.

Company Size = Natural log of total assets, as at 30 June 2008.

Governance Quality = Score determined by adding one point for adoption of nominated ASX governance recommendations as disclosed in the 2008 financial report.

Leverage = Total assets divided by total liabilities as at 30 June 2008, winsorised at 1 per cent.

Big 4 Auditor = Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm as at 30 June 2008, and zero (0) otherwise.

Company Age = The number of years since the company listed on the ASX.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

The following sections provide a detailed description of the dependent variables, independent variables and control variables used to operationalise the constructs analysed in Models 1 and 2.

5.2.1 Measurement of Variables – Model 1 (Committee Formation) and Model 2 (Committee Composition)

Dependent Variables

The dependent variable in Model 1 is a dichotomous variable indicating whether the company has formed a *Remuneration Committee*. The variable has a value of one (1) if the company has formed a remuneration committee and zero (0) otherwise.

To measure adoption of the ASX recommendations regarding committee composition, a second dichotomous dependent variable indicates whether the company

has adopted all three membership guidelines included in the ASX remuneration committee recommendations or not. That is, the committee consists of at least three members, the majority of which are independent and is chaired by an independent chairperson. In Model 2, *ASX Adopter* is coded one (1) if the committee composition is consistent with the three membership guidelines included in the ASX remuneration committee recommendations and zero (0) otherwise.

Independent Variables

Hypotheses 1 to 4 examine the relation between agency related demand characteristics and adoption of the ASX remuneration committee recommendations. Chapter 4 of this thesis identified from the existing literature a number of proxy measures of agency costs, including patterns of shareholding, CEO entrenchment, the complexity of company operations, high company growth, high free cash flows and low asset turnover.

Patterns of shareholding examined in the study are: shareholder dispersion, insider equity ownership and institutional equity ownership. One measure is used as a proxy for shareholder dispersion and insider share ownership on the basis that lower insider equity ownership indicates greater shareholder dispersion and vice versa. *Ownership Structure* is measured as the natural log of the percentage of issued ordinary equity owned by insiders (Singh and Davidson, 2003). Insiders are defined as directors, management, large individual shareholders deemed to be related parties, and their related parties. *Institutional Shareholding* is measured as the percentage of ordinary shares held by institutional shareholders identified from the top twenty shareholders disclosed in the 2008 annual report. Shareholding by financial institutions, insurance companies, fund management companies, superannuation and pension funds,

investment companies, and investment and unit trusts are considered institutional holdings (Henry, 2008).

A further agency cost associated with management is CEO Entrenchment. *CEO Entrenchment* is measured as a dichotomous variable taking the value of one (1) if there has been a change in CEO in the two years prior to the release of the 2008 financial report and zero (0) otherwise [1] (Anderson and Bizjak, 2003; Lee, 2009). It is considered that the longer the CEO holds his or her position the greater the opportunity for the CEO to influence the Board and the remuneration committee. Therefore holding the position for longer than two years is considered sufficient time for the CEO to become entrenched and to wield influence over the Board and remuneration committee.

Prior studies identify a number of possible measures of the complexity of company operations. These include: the number of industry and geographical segments in which the company operates (Denis et al., 1997; Boone et al., 2007; Linck et al., 2008), the number of industry classifications (GICS) identified in the annual report (Denis et al., 1997; Dey, 2008), a Herfindahl-Hirschman index measure (Denis et al., 1997; Bushman et al., 2004), the number of subsidiary entities, and the number of employees (Kent et al., 2010). As all Australian listed companies are required to disclose business and geographical segment revenue and assets in their annual reports, the study uses business and geographical segments on the basis that this information provides a more complete data set. *Business Segments* is measured as the number of business segments disclosed in the 2008 financial report. *Geo. Segments* is measured as the number of geographical segments disclosed in the 2008 financial report.

[1] CEO Tenure is used as an alternate measure of CEO Entrenchment in robustness testing.

Other company characteristics associated with agency costs are company growth, asset turnover and free cash flows. Company *Growth* is measured by the book to market ratio of equity (Dey, 2008; Rainsbury et al., 2008; Lehn et al., 2009; Sun and Cahan, 2009; Frydman and Saks, 2010). The variable is winsorised at 1 per cent for inclusion in the analysis. *Asset Turnover* is measured as operating revenue divided by the average value of assets (Ang et al., 2000; Singh and Davidson, 2003; Florakis, 2008; Lin and Liu., 2009). *Free Cash Flow* is measured as the difference between the gross cash flow from operations less gross investment. The variable is winsorised at 1 per cent.

The ability of companies to adopt the ASX remuneration committee recommendations is also related to board capacity. Hypotheses 5a and 5b examine the relation between board capacity and adoption of the ASX remuneration committee recommendations. Board capacity is operationalised by board size and the number of independent directors. *Board Size* is measured as the number of directors and *Board Independence* is measured as the number of independent directors divided by the number of directors. Board size is of direct relevance to the decision to form a remuneration committee whereas board independence is relevant to the decision regarding committee composition. As the ASX Recommendations include a recommendation that the board have a majority of independent directors (ASX Corporate Governance Council, 2007, Recommendation 2.1), board independence is incorporated into the governance quality score used as a control measure in the analysis for committee formation. However, board independence is included as a separate independent variable in the committee composition analysis and the governance quality score adjusted accordingly.

Control Variables

Other company characteristics identified in the literature as being relevant to the decision to adopt the ASX Recommendations are company size, leverage, engagement of a Big 4 audit firm, the overall strength of a company's governance framework, company age and industry effects. Other company characteristics are identified in the literature as being relevant to the decision to adopt the ASX Recommendations. Measures of these characteristics are included in the analyses as control variables. The control variables include company size, leverage, engagement of a Big 4 audit firm, the overall strength of a company's governance framework, company age and industry effects.

Company Size is included in the analyses as a control variable for a number of reasons. First, the shareholding of larger companies is anticipated to be more widely held than smaller companies, thereby increasing the need for effective monitoring by directors. Larger companies tend to have greater scope of operations and hierarchy thereby increasing the potential for management to act opportunistically or otherwise shirk their responsibilities (Demsetz and Lehn, 1985; Hughes et al., 2003). Larger companies are likely to have a greater institutional shareholding base and potentially be exposed to greater scrutiny by analysts, regulators and institutional shareholders (Watts and Zimmerman, 1990; Krishnan and Zhongxia, 2005). Executives in larger companies are more likely to receive larger remuneration packages and therefore are more likely to attract greater scrutiny from stakeholders and market participants, compared to smaller companies (Krishnan and Zhongxia, 2005; Edmans and Gabaix, 2009). Consequently, it is anticipated that larger companies experience higher agency costs (Edmans and

Gabaix, 2009), and therefore greater demand to adopt the ASX remuneration committee recommendations. *Company Size* is measured by the natural log of total assets.

Prior studies suggest that larger companies are more likely to voluntarily implement governance structures whereas smaller companies tend to have limited capacity to implement *best practice* governance frameworks (Rainsbury et al., 2008; Kent et al., 2010). Prior studies have also identified that the cost of implementing *best practice* governance is substantially greater for small companies (Dedman, 2000; Linck et al., 2008).

Companies that have debt in their capital structure are subject to requirements of debt contracts with lenders. As debt levels increase, providers of debt capital are more likely to actively monitor the borrowing company so as to reduce expropriation of their wealth (Jensen and Meckling, 1976; Cotter and Silvester, 2003; Florackis, 2008). In addition, lenders are likely to require borrowing companies to implement *best practice* governance arrangements. Accordingly, leverage is included in the analyses as a control variable. *Leverage* is measured as the ratio of total assets to total liabilities, and is winsorised at 1 per cent for inclusion in the analysis.

Prior research suggests that Big 4 auditors encourage their clients to adopt *best practice* governance guidelines (Watts and Zimmerman, 1990; Carson, 2002). Therefore, the appointment of a Big 4 audit firm is included in the analyses as a control variable. *Big 4 Auditor* has a value of one (1) if the company has engaged a Big 4 audit firm, and zero (0) otherwise.

Prior research suggests that company age can also be used to proxy for the company's diversity and complexity. Older companies are also more likely to have

larger and more diverse boards (Boone et al., 2007) as internal governance structures generally evolve over time (Berry et al., 2006). Consequently company age is incorporated into the analyses (Boone et al., 2007; Linck et al., 2008). *Company Age* is measured as the number of years since the company listed on the ASX (Boone et al., 2007).

In addition to the remuneration committee, other governance mechanisms are related to remuneration practices (Barkema and Gomez-Mejia, 1998). Research suggests that excessive executive remuneration occurs in companies that have poor corporate governance quality (Core et al., 1999; Singh, 2006; Sun et al., 2009). Therefore, a measure of the company's overall governance quality is included in the analyses as a control. Approaches to measuring overall governance strength include the development of additive governance indices (Gompers et al., 2003). Other studies have applied factor analytic techniques to develop governance scores (Larcker et al., 2007; Dey, 2008; Beekes et al., 2010). The approach by Gompers, Ishii, and Metrick, (2003) of developing an index is followed in this study.

The purpose of the Gompers et al. (2003) index was to develop a measure of shareholder rights for US companies. The score was determined by considering 24 shareholder rights items and adding one point for the existence or absence of an item that reduced shareholder rights. Following this approach, the current study develops a *Governance Quality* index by adding one point for adoption of the ASX Recommendations. The score only includes those ASX Recommendations for which adoption can be objectively determined from the governance statement included in the annual report of each company. Table 5-1 summarises the relevant ASX Corporate Governance Principles and Recommendations items and the measurement of the index.

TABLE 5-1: GOVERNANCE QUALITY INDEX

Principle / Recommendation	**Score**
2.1 The majority of the board should be independent directors[2].	+ 1 if adopted, 0 otherwise
2.2 The board chairperson should be an independent director.	+ 1 if adopted, 0 otherwise
2.3 The roles of the board chairperson and chief executive officer should not be exercised by the same individual.	+ 1 if adopted, 0 otherwise
2.4 The board should establish a nomination committee.	+ 1 if adopted, 0 otherwise
4.1 The board should establish an audit committee.	+ 1 if adopted, 0 otherwise
4.2 The audit committee should be structured so that it: - consists of only non-executive directors - consists of a majority of independent directors - is chaired by an independent chair, who is not chair of the board - has at least three members.	+ 1 if adopted, 0 otherwise
Total Possible Maximum Score:	6

Source: ASX Corporate Governance Council, 2007.

The types of governance mechanisms introduced by companies to reduce agency costs are likely to be associated with industry characteristics in addition to individual company characteristics (Bathala and Rao, 1995). Consistent with extant research, the analyses control for industry effects (Donaldson and Davis, 1991; Brick et al., 2006; Sapp, 2008; Windsor and Cybinski, 2009). Dummy variables for Global Industry Classification Standard (GICS) industry sectors are included to control for industry effects.

[2] In the formation analysis (Model 1), board independence is included in the governance quality score. In the composition analysis (Model 2), board independence is excluded from the governance quality score and included as a separate independent variable. Consequently in the composition analysis, the governance quality score reduces from a possible maximum score of six to a possible maximum score of five.

A summary of the variables incorporated into the Models 1 and 2, to test Hypotheses 1 to 5 is included below at Table 5-2.

TABLE 5-2: SUMMARY OF VARIABLES – COMMITTEE FORMATION AND COMPOSITION

Dependent Variables	***Measure***
Remuneration Committee	Dichotomous variable, coded one (1) if the company has formed a remuneration committee, and zero (0) otherwise.
ASX Adopter	Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.
Independent Variables	***Measure (Agency Costs)***
Ownership Structure	Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.
CEO Entrenchment	Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.
Institutional Shareholding	Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report.
Business Segments	Number of business segments in which the company operates, as disclosed in the 2008 annual report.
Geo. Segments	Number of geographical segments in which the company operates, as disclosed in the 2008 annual report.
Growth	Book value of equity divided by market value of equity, winsorised at 1 per cent.
Asset Turnover	Operating revenue divided by average total assets.
Free Cash Flow	Difference between the gross cash flow from operations less gross investment. The variable is winsorised at 1 per cent.

Table 5-2: SUMMARY OF VARIABLES – COMMITTEE FORMATION AND COMPOSITION (cont.)

Independent Variables	***Measure (Board Capacity)***
Board Size	Number of directors appointed to the Board.
Board Independence	Number of independent directors divided by the number of directors.
Control Variables	***Measure***
Company Size	Natural log of total assets.
Leverage	Total assets divided by total liabilities, winsorised at 1 per cent.
Big 4 Auditor	Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm, and zero (0) otherwise.
Company Age	The number of years since the company listed on the ASX.
Governance Quality	Score determined by adding one point for adoption of nominated ASX Recommendations included in governance strength index.
Industry	Indicator variable for Global Industry Classification Standard (GICS) industry sector. Ten industry classifications were used to classify company industry.

5.3 MODEL SPECIFICATION – REMUNERATION COMMITTEE EFFECTIVENESS

The second part of this study analyses the association between adoption of the ASX remuneration committee recommendations and aspects of executive remuneration practice. Hypothesis 6 examines how adoption of the ASX remuneration committee recommendations influences executive remuneration levels and pay for performance sensitivity. Hypotheses 7 examines whether adoption of the ASX remuneration committee recommendations is associated with higher shareholder satisfaction regarding executive remuneration arrangements. The dependent variable in each analysis is a continuous variable. Therefore, ordinary least squares multiple regression analysis is employed to test Hypotheses 6 and 7.

Existing research has considered the effectiveness of executive remuneration by considering the level of remuneration and whether remuneration is linked with financial performance. Hypothesis 6 expects that adoption of the ASX remuneration committee recommendations is associated with executive remuneration levels and stronger pay for performance sensitivity in executive remuneration. Two measures of remuneration practice are suggested in Hypothesis 6: remuneration levels and the link between remuneration and company performance.

Prior research on executive remuneration has largely focused on the remuneration of the CEO (Jensen and Murphy, 1990; Murphy et al., 1999; Merhebi et al., 2006; Matolcsy and Wright, 2007). However, reporting of remuneration of the senior executive team, not just the CEO, in the annual report of listed Australian companies has been required for some time (Rankin, 2010). In Australia, disclosure of the top five executives has been required since 2005, although research in this regard is limited (Rankin, 2010). In addition, the annual non-binding shareholder vote, which is also examined as part of this study, relates to the entire remuneration report encompassing remuneration of the senior executive team, not just the CEO. Consequently, this study examines the remuneration of the top five ranked executives.

The disclosure of the five senior executives is generally referred to in the annual report as either the *key management personnel* or the five highest paid executives. This distinction arises due to inconsistency between executive remuneration disclosure requirements outlined in the Corporations Act 2001 (*Cth)* (s300A(1)(c)) and the disclosures required by the relevant Australian Accounting Standard (AASB 124 "Related Party Disclosures"). *Key Management Personnel* are defined by the accounting standard as "those persons having authority and responsibility for planning,

directing and controlling the activities of the [company]" (AASB 124:9, 2007). Consequently key management personnel do not necessarily reflect the five highest paid executives. Incorporation of the senior executive team also encompasses the CEO.

The models developed to test Hypothesis 6 are expressed at Models 3 and 4 below. Model 3 tests the relation between adoption of the ASX remuneration committee recommendations and the level of cash remuneration of the key executives (H6a), whilst Model 4 tests the relation between adoption of the ASX remuneration committee recommendations and the pay for performance sensitivity in the remuneration of key executives (H6b).

Model 3 (Remuneration Levels):

$$Ln\ Cash\ Remuneration = \beta_0 + \beta_1 ASX\ Adopter + \beta_2 ROA + \beta_3\ ASX\ Adopter^{*}\ ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 Company\ Size + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Separate\ Board\ Chair + \beta_{11} Independent\ Board\ Chair + \beta_{12} CEO\ Entrenchment + \beta_{13} Growth + \beta_{14} Risk + \beta_{15} Industry + \varepsilon$$

Where:

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives.

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ROA = Return on Assets for 2008.

ASX Adopter*ROA = Interaction variable, ASX Adopter * ROA.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1 per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Model 4 (Pay for Performance Sensitivity):

$$\Delta \textit{ Ln Cash Remuneration} = \beta_0 + \beta_1 \textit{ASX Adopter} + \beta_2 \Delta \textit{ROA} + \beta_3 \textit{ASX Adopter} * \Delta \textit{ROA} + \beta_4 \textit{TSR} + \beta_5 \textit{Ln Cash Remuneration}_{t-1} + \beta_6 \textit{Insider Shareholding} + \beta_7 \textit{Institutional Shareholding} + \beta_8 \textit{Company Size} + \beta_9 \textit{Board Size} + \beta_{10} \textit{Board Independence} + \beta_{11} \textit{Separate Board Chair} + \beta_{12} \textit{Independent Board Chair} + \beta_{13} \textit{CEO Entrenchment} + \beta_{14} \textit{Growth} + \beta_{15} \textit{Risk} + \beta_{16} \textit{Industry} + \varepsilon$$

Where:

Δ Ln Cash Remuneration = One year change in the natural log of cash remuneration for the top five ranked executives between 2007 and 2008.

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ΔROA = the change in return on assets.

ASX Adopter * ΔROA = Interaction variable, ASX Adopter * ΔROA.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Ln Cash Remuneration$_{t-1}$ = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives in the prior year.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1 per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Whilst Hypotheses 6a and 6b focus on measures of executive remuneration, Hypothesis 7 examines the shareholders' views regarding remuneration practice. Extending the proposition that adoption of the ASX remuneration committee recommendations leads to effective remuneration practice, Hypothesis 7 expects that companies that adopt the ASX remuneration committee recommendations experience low levels of shareholder dissent regarding the shareholder vote on the annual remuneration report. Hence, the study also incorporates the annual shareholder non-binding vote as a measure of the effectiveness of the remuneration committee. The model developed to test Hypotheses 7 is expressed as Model 5 below.

Model 5 (Shareholder Dissent):

$$Shareholder\ Dissent = \beta_0 + \beta_1 ASX\ Adopter + \beta_2 Ln\ Cash\ Remuneration + \beta_3 ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 Company\ Size + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Industry + \varepsilon$$

Where

Shareholder Dissent = The number of negative votes cast on the 2008 annual remuneration report / (number of votes cast for + number of votes cast against the 2008 annual remuneration report).

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives.

ROA = Earnings from continuing operations divided by total average assets.

TSR = Dividend adjusted annualised percentage change in stock price.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties and their related parties.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

Company Size = Natural log of total assets.

Board Size = Number of directors appointed to the board.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

The following sections provide a detailed description of the dependent variables, independent variables and control variables used to test Hypotheses 6 and 7.

5.3.1 Measurement of Variables – Models 3, 4 and 5 (Remuneration Committee Effectiveness)

Dependent Variables

Remuneration Levels and Pay for Performance Sensitivity:

Hypothesis 6 examines remuneration committee efficacy by reference to remuneration levels (H6a) and the alignment of executive remuneration to company performance (H6b). Therefore two models are used to test Hypothesis 6.

Cash remuneration is incorporated as the dependent variable in Model 3. Empirical evidence suggests that cash remuneration is an appropriate proxy for total CEO remuneration (Tosi et al., 2000) and a more appropriate proxy than other individual cash components of CEO remuneration (Sun and Cahan, 2009). Additionally, extant research on Australian companies has demonstrated that not all Australian companies provide equity based remuneration (Matolcsy and Wright, 2007). Whilst the use of risk incentive remuneration has increased in recent years, the use of long term incentive plans represents less than twenty per cent of total remuneration (Rankin, 2010). *Ln Cash Remuneration* of the top five ranked senior executives is measured as the natural log of total salary, superannuation, fringe benefit, and cash bonus payments (Merhebi et al., 2006; Windsor and Cybinski, 2009).

The log transformation of cash remuneration used in the study is consistent with prior research (Core et al., 1999; Sapp, 2008; Ferri and Maber, 2009; Sun and Cahan, 2009; Heaney et al., 2010; Tian and Twite, 2010; Armstrong et al., 2012). As the methodology employs ordinary least squares regression analysis, the log transformation helps to achieve a normal distribution in the dependent variable and is likely to reduce the effect of heteroskedasticity (Sun and Cahan, 2009).

In considering the pay for performance sensitivity of remuneration, the dependent variable in Model 4 reflects the change in executive cash remuneration. The measure used in the pay for performance analysis is the one year change in the natural log of cash remuneration (Δ *Ln Cash Remuneration)* of the top five ranked executives (Jensen and Murphy, 1990; Sun and Cahan, 2009).

Shareholder Dissent on the Annual Remuneration Report

The dependent variable in Model 5 measures the level of shareholder dissent with the company's remuneration arrangements of its key executives. Recall that shareholders vote on the annual remuneration report which is included in the company's annual report. Although this vote is non-binding, it is an external measure of the shareholder's satisfaction with the executive remuneration practices of the company. It is therefore considered to be a measure of shareholder satisfaction with the remuneration committee in those companies that have chosen to form a remuneration committee or fully adopt the ASX remuneration committee recommendations. The study incorporates the proxy results published by the company at the end of the annual general meeting.

Shareholder Dissent is measured as the number of shareholder votes cast against the annual remuneration report divided by the sum of *no* and *yes* votes cast. This measure is consistent with the approach adopted by Carter and Zamora (2009) and Clarkson et al. (2011). Whilst alternate measures of shareholder dissent have been used in the literature (Conyon and Sadler, 2010), the measure adopted by this study reflects the Australian institutional setting (Clarkson et al., 2011).

Table 5-3 summarises the dependent variables incorporated into the analysis regarding the effectiveness of the remuneration committee.

TABLE 5-3: REMUNERATION COMMITTEE EFFECTIVENESS – DEPENDENT VARIABLES

Remuneration Levels & Pay for performance sensitivity (H6a,b)	
Ln Cash Remuneration	Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives.
Δ Ln Cash Remuneration	One year change in the natural log of cash remuneration for the top five ranked executives between 2007 and 2008.
Shareholder Vote (H7)	
Shareholder Dissent	Total no votes cast / (no votes cast + yes votes cast) on the annual remuneration report.

Independent Variables

Remuneration Levels and Pay for Performance Sensitivity:

Independent variables used in the analysis have been selected by reference to the current literature. Recall that Hypothesis 6 examines the association between adoption of the ASX remuneration committee recommendations and (a) executive remuneration levels and (b) the link between remuneration and company performance. The variables of key interest are the adoption of the ASX remuneration committee recommendations and the interaction variable related to adoption of the ASX remuneration committee recommendations and a measure of company operating performance. *ASX Adopter* is a dichotomous variable, coded one (1) if the company has adopted all three of the membership guidelines included in the ASX remuneration committee recommendations, and zero (0) otherwise. The interaction variable *ROA * ASX Adopter* is measured as ROA*ASX Adopter.

Interaction variables have been incorporated into prior studies (Sun and Cahan, 2009; Windsor and Cybinski, 2009). The interaction determines whether the remuneration committee is associated with executive remuneration that is linked to

company performance. In analysing the pay for performance sensitivity, the interaction variable ΔROA * ASX Adopter is substituted for ROA * ASX Adopter. *ΔROA * ASX Adopter* is measured as ΔROA*ASX Adopter. Whilst some researchers recommend mean centering the continuous variable included in the interaction to reduce the potential impact of multicollinearity, extant research suggests that mean centering is not necessary where the variable has a meaningful zero point (Dalal and Zickar, 2012). Therefore, the untransformed version of the continuous variable is included in the interaction.

The other independent variables used in Models 3 and 4 reflect company characteristics identified in extant literature as being determinants of executive remuneration. Measures of accounting return and stock return are incorporated into Models 3 and 4 (Core et al., 1999; Anderson and Bizjak, 2003; Merhebi et al., 2006; Sapp, 2008; Sun and Cahan, 2009). Prior studies include both measures of performance, as stock return reflects short and long term effects of management decisions and are subject to less manipulation than accounting measures of performance, whilst accounting measures provide a more direct reflection of actions by management (Ferri and Maber, 2009). Additionally, the use of accounting based performance as incentives, for example short term bonuses or long term incentive plans is widely accepted practice (Murphy et al., 1999). Return on Assets is used in this study as extant research identifies those incentive components of CEO remuneration contracts are often based on accounting return (Clarkson et al., 2006). Return on Assets *(ROA)* is measured as earnings from continuing operations divided by total average assets. Shareholder return reflects the annual return to shareholders of ordinary equity. Total Shareholder Return *(TSR)* is measured as the dividend adjusted annualised percentage

change in stock price. In analysing the pay for performance sensitivity, change in ROA (ΔROA) is substituted for ROA. ΔROA is measured as the change in return on assets between 2007 and 2008.

Consistent with Sun and Cahan (2009), prior year remuneration is incorporated as an independent variable in the pay for performance sensitivity analysis. Prior year remuneration is considered to be a significant determinant of future remuneration levels (Conyon, 1997; Girma et al., 2007; Gregory-Smith, 2009). *Ln Cash Remuneration*$_{t-1}$ is measured as the natural log value of the prior year's total cash remuneration for the top five ranked executives.

Shareholder Dissent

Recall Hypothesis 7 expects that the presence of a remuneration committee that adopts the ASX remuneration committee recommendations is associated with lower levels of shareholder dissent regarding executive remuneration. Consistent with the above discussion, *ASX Adopter* is incorporated into the model as an independent variable. This variable examines the relation between the presence of a remuneration committee that adopts the ASX remuneration committee recommendation and the annual shareholder non-binding vote on the remuneration report. This variable is measured the same way as outlined in the earlier analysis regarding committee formation and composition. Additionally as the shareholder non-binding vote relates to the annual remuneration report, executive remuneration is incorporated into the model as an independent variable. *Cash Remuneration* is included in the model and takes the same value as outlined above.

Control Variables

Remuneration Levels and Pay for Performance Sensitivity

Other economic and company characteristics are considered relevant to executive remuneration practice and oversight. These characteristics are drawn from prior theoretical and empirical studies, and incorporated into the analyses as control variables. These variables proxy for economic determinants and company characteristics considered relevant to executive remuneration practice and oversight.

Consistent with extant literature, it is expected company size and company growth opportunities are related to executive remuneration (Core et al., 1999; Tosi et al., 2000) as larger companies are expected to pay higher remuneration (Conyon and Murphy, 2000; Sapp, 2008). Further, companies exhibiting higher growth opportunities and greater complexity are also expected to be associated with higher executive remuneration (Core et al., 1999). Consequently, company size and growth are included in the analyses as control variables. Some studies incorporate the natural log of total sales and sales squared (Core et al., 1999; Leone et al., 2006; Sun and Cahan, 2009) as the proxy for company size in order to control for potential non-linear size effects. Leone et al. (2006) suggest that incorporating total assets to proxy for company size or the log of the proxy for company size achieves similar results. Accordingly, *Company Size* is measured by the natural log of total assets (Anderson and Bizjak, 2003; Merhebi et al., 2006; Capezio et al., 2011). Company *Growth* is measured by the book to market ratio of equity (Ferri and Maber, 2009; Matolcsy and Wright, 2011). The variable is winsorised at 1% for inclusion in the analysis.

As company risk has also been identified as relevant to executive remuneration in other empirical studies (Smith Jr and Watts, 1992; Core et al., 1999), company risk is incorporated into the study as a control variable. Company risk reflects the degree to which the financial valuation of the company's common equity varies in relation to movements of the broader market (Ozkan, 2007). A frequently used measure of company risk is the beta of a company's stock, calculated by regressing a company's monthly stock return on the corresponding country's market index return (Ozkan, 2007). *Risk* is measured as the company's five year average beta relative to the MSCI emerging markets index.

Consistent with extant research, industry dummies are incorporated into the study (Core et al., 1999; Murphy et al., 1999; Conyon and Murphy, 2000; Sapp, 2008). As outlined earlier in the chapter, indicator variables for Global Industry Classification Standard (GICS) industry sector are used to reflect *Industry* effects.

In addition to economic determinants, other company characteristics are considered relevant to executive remuneration. These characteristics relate to board size, measures of board governance and CEO power. CEO power is expected to increase in companies with larger boards (Jensen, 1993), boards evidencing lower proportion of non-executive or independent directors (Ryan and Wiggins, 2001; Armstrong et al., 2012), where the board chairperson is not independent (Core et al., 1999; Armstrong et al., 2012) and where the CEO is also the Chairperson of the Board (Core et al., 1999; Ryan and Wiggins, 2001; Bhagat and Bolton, 2008; Armstrong et al., 2012). Large boards are also associated with being less effective monitors of CEO behaviour (Jensen, 1993). Consequently larger boards can lead to increased executive remuneration levels

(Guest, 2010). Measures for board size, board governance and CEO entrenchment are incorporated into the analyses.

Board Size is measured as the number of directors on the board (Lee, 2009; Heaney et al., 2010). *Separate Board Chair* is a dummy variable coded one (1) if the roles of the CEO and Chair are performed by different people and zero (0) otherwise. *Board Independence* is measured as the number of independent directors appointed to the board divided by the total number of directors appointed to the board. *Independent Board Chair* is a dummy variable coded one (1) if the chairperson is an independent director and zero (0) otherwise. Finally *CEO Entrenchment* is a dichotomous variable coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise. This variable is similar to the variable used in the Anderson and Bizjak (2003) and Lee (2009) studies.

Other company characteristics incorporated as control variables relate to the company's ownership structure. Extant research suggests that governance quality is lower in companies that evidence high CEO power (Bathala and Rao, 1995; Sun and Cahan, 2009). Additionally it is argued that the need to ensure greater alignment between remuneration and shareholder outcomes decreases as CEO or insider shareholding increases (Ferri and Maber, 2009). Large external shareholdings are expected to act as a substitute monitoring mechanism and can reduce CEO power (Core et al., 1999; Hartzell and Starks, 2003; Sun and Cahan, 2009). Insider shareholding and institutional shareholding are included in the analysis as control variables.

Insider Shareholding is measured as the natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties. *Institutional Shareholding* is measured as the

percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report.

Table 5-4 summarises the variables used in Model 3 and Model 4. Model 3 examines executive remuneration levels for the top five ranked executives. Whilst Model 4 examines the pay for performance sensitivity in executive remuneration awarded to the top five ranked executives.

Shareholder Dissent

Consistent with existing research, control variables measuring company size, board characteristics, ownership concentration and company performance are incorporated into the shareholder dissent model (Carter and Zamora, 2009; Conyon and Sadler, 2010). Board characteristics include measures of board size and board independence. Company ownership characteristics include insider shareholding and institutional shareholding. Company performance measures include return on assets and total shareholder return. Industry effects are also incorporated into the model. *Company Size, Board Size, Board Independence, Insider Shareholding, Institutional Shareholding, ROA and TSR* adopt the same definitions as outlined earlier in the chapter.

Table 5-5 summarises the variables used in Model 5 examining the association between shareholder dissent on the annual remuneration report, executive remuneration and adoption of the ASX remuneration committee recommendations.

TABLE 5-3: REMUNERATION COMMITTEES AND EXECUTIVE REMUNERATION

Independent Variable	***Measure***
ASX Adopter	Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.
ROA	Return on assets for 2008.
TSR	Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.
ΔROA	The change in return on assets from 2007 to 2008.
ROA*ASX Adopter	Interaction variable, ROA*ASX Adopter.
ΔROA*ASX Adopter	Interaction variable, ΔROA * ASX Adopter.
Company Size	Natural log of total assets as at 30 June 2008.
Growth	Book value of equity divided by market value of equity, winsorised at 1 per cent.
Risk	Five year average beta relative to the MSCI emerging markets index as at 30 June 2008.
Institutional Shareholding	Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.
Insider Shareholding	Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008.
Board Size	Number of directors appointed to the board as at 30 June 2008.
Separate Board Chair	Dummy variable coded one (1) if the roles of the CEO and board chair are performed by different people, and zero (0) otherwise.
Board Independence	The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.
Independent Board Chair	Dummy variable coded one (1) if the board chairperson holding office at 30 June 2008 is an independent director, and zero (0) otherwise.
CEO Entrenchment	Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.
Industry	Indicator variable for Global Industry Classification Standard (GICS) industry sector. Ten industry classifications are used to classify company industry.

TABLE 5-4: SHAREHOLDER DISSENT AND REMUNERATION COMMITTEE EFFICACY

Independent Variable	***Measure***
ASX Adopter	Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration recommendations regarding committee composition, and zero (0) otherwise
Cash Remuneration	Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives.
Control Variables	***Measure***
Company Size	Natural log of total assets.
Board Size	Number of directors appointed to the board.
Board Independence	The number of independent directors appointed to the board divided by the total number of directors appointed to the board.
ROA	Earnings from continuing operations divided by total average assets.
TSR	Dividend adjusted annualised percentage change in stock price.
Institutional Shareholding	Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.
Insider Shareholding	Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties and their related parties.
Industry	Indicator variable for Global Industry Classification Standard (GICS) industry sector. Ten industry classifications are used to classify company industry.

5.4 SAMPLE AND DATA

The sample consists of Australian listed companies in 2008. The sample period of 2008 was selected as it allows sufficient time for companies to have developed or modified their governance structure following the release of ASX Recommendations in 2003 and their revision in 2007 (ASX Corporate Governance Council, 2003 and 2007).

In addition, the sample period is before the worst of the international financial problems that commenced in the latter part of 2008. The sample period also predates the amendment to the ASX Listing Rules requiring companies included in the S&P 300 Index to form a remuneration committee consisting solely of non-executive directors.

An initial sample of 1,756 Australian public listed companies in 2008 with a 30 June balance date was identified. Banks were excluded from the sample because of their different regulatory requirements. Companies were also eliminated if they were listed trusts or stapled entities. These two groups are non-operating companies with special governance arrangements that are different to the majority of listed entities. Companies were also eliminated if they were dual-listed in the United States (US) because different regulation is applicable to their governance practices. Companies were excluded if they were dual-listed in other countries which did not require an annual shareholder vote on the company's remuneration report. Companies delisted during the sample period were also excluded because they had missing data. For these companies, no annual general meeting was held during the year, or the 2008 financial report was not issued. These exclusions reduced the sample to 1,504 companies.

Finally, as multiple regression is sensitive to the inclusion of outliers, exploratory regression analysis was performed to identify outliers. A review of the standardised residual values was performed. Whilst standardised scores higher than 2.5 to 3.3 are generally indicative of outliers (Tabachnick and Fidell, 2001; Pallant, 2007), in large samples the cut-off point can be amended to up to 4 (Hair et al., 2010). Seven companies were identified as having standardised residual values in excess of positive or negative 4. These companies were deleted from the sample as they were deemed to not be representative of the population (Pallant, 2007; Hair et al., 2010). A review of

Cook's Distance values was also performed to identify whether any other data points were exerting undue influence. The Cook's Distance values were all below 1, indicating that no other data points were unduly influencing the results (Pallant, 2007). The final sample includes 1,497 Australian listed companies. A summary of the sample selection process is presented in Table 5-6.

TABLE 5-5: SAMPLE SELECTION

Number of listed companies in 2008, with 30 June balance date	1,756
Less:	
Companies identified as delisting during period	37
Trusts & stapled companies	122
Dual listed (US) companies	15
Foreign domiciled companies	66
Remaining banks	5
2008 financial report not available	7
Outliers	7
Final Sample	**1,497**

A sub-sample of companies that had formed a remuneration committee was used in the analysis of committee composition. This sample was used to examine factors relevant to companies adopting the ASX remuneration committee recommendations regarding committee size and independence.

In the examination of executive remuneration, companies included in the full sample that pay remuneration are used in the analysis. The full sample is also used in the examination of shareholder dissent on the annual remuneration report.

Data were sourced from commercial data bases and hand collected. Company financial data were downloaded from FinAnalysis, Bloomberg and S&P Capital IQ

commercial databases. Insider share ownership data and total cash remuneration awarded to the top five ranked executives were downloaded from the S&P Capital IQ database. Segment data, governance data, including adoption of individual ASX Recommendations and adoption of the ASX remuneration committee recommendations, and the details of institutional investors included in the top 20 shareholders as at 30 June 2008 were hand collected from published 2008 annual reports. The proxy results for the annual non-binding shareholder vote on the remuneration report was hand collected from the 2008 annual general meeting voting results announcements lodged with the ASX.

5.5 SUMMARY

This chapter has outlined the sample selection process, data collection methods and research design used to test hypotheses 1 to 7 outlined in Chapter 4. The models used to test the hypotheses are presented in detail. Dependent, independent and control variables used in each of the models presented are defined. Descriptive statistics and the results of the analyses performed are presented in the following two chapters. The next chapter presents the descriptive statistics and results of the analysis performed to test Hypotheses 1 to 5 related to remuneration committee formation and composition. The chapter following thereafter presents the descriptive statistics and results of the analysis performed to test Hypotheses 6 and 7 related to remuneration committee practice.

6. ANALYSIS AND RESULTS – FORMATION AND COMPOSITION

6.1 INTRODUCTION

This study examines: (1) the incentives for a company to voluntarily form a remuneration committee; (2) the incentives to adopt the ASX remuneration committee recommendations regarding committee composition, and (3) how adoption of the ASX remuneration committee recommendations influences executive remuneration levels and linkage to company performance.

Chapter 4 presented seven hypotheses based on an agency theoretical framework. Chapter 5 described the research methodology employed to test the hypotheses. This chapter presents the analysis of Hypotheses 1 to 5 related to remuneration committee formation and composition. Hypotheses 1 to 4 examine committee formation, while Hypothesis 5 examines committee composition. The hypotheses are directly related to research questions 1(a) and 1(b) regarding why companies form a remuneration committee and the factors that determine adoption of the ASX remuneration committee composition recommendations.

Hypothesis 1 examines the association between shareholding characteristics and demand for adoption of the ASX remuneration committee recommendations. Hypothesis 2 examines the relation between CEO entrenchment and the demand for adoption of the ASX remuneration committee recommendations. Hypothesis 3 analyses the association between company complexity and the demand for adoption of the ASX remuneration committee recommendations. Hypothesis 4 examines the relation between other measures of agency costs and the demand for adoption of the ASX

remuneration committee recommendations. Hypothesis 5 analyses the association between board capacity and adoption of the ASX remuneration committee recommendations.

This chapter presents the results of the logistic regression analyses which examine factors relevant to adoption of the ASX remuneration committee recommendations. Section 6.2 presents the descriptive statistics and bivariate correlations for the variables. Section 6.3 presents the main results of the logistic multivariate regression analysis of remuneration committee formation (Model 1) and composition (Model 2). Section 6.4 presents the results of additional analysis performed, with the results of robustness tests reported at section 6.5. The chapter concludes at section 6.6.

6.2 DESCRIPTIVE STATISTICS

6.2.1 Dependent Variables

The dependent variable used in the committee formation model (Model 1) which examines remuneration committee formation is a dichotomous variable reflecting whether the company has formed a remuneration committee. The dependent variable used in the committee composition model (Model 2) which examines remuneration committee composition is also a dichotomous variable indicating full adoption or otherwise of the ASX remuneration committee recommendations. Table 6-1 presents the descriptive statistics for the dependent variables.

Of the 1,497 listed companies included in the sample, 796 companies (53 per cent) had formed a remuneration committee. Of these companies, 33 (2 per cent) indicated in their annual report that although a formal remuneration committee had been formed, the committee members were the full board. Additionally, 279 companies (19 per cent)

disclosed in their annual report that remuneration and nomination functions were combined into one committee. The balance of 701 companies (47 per cent) had not formed a remuneration committee in the sample period.

The ASX remuneration committee recommendations contain three membership guidelines which are that the committee should have at least three members, the majority of which should be independent, and an independent chairperson should be appointed to the committee. The remuneration committee of 528 companies (66 per cent) had three or more members, 523 companies (66 per cent) had constituted a remuneration committee consisting of a majority of independent directors, and 590 companies (74 per cent) had appointed an independent chairperson to the committee. Of the 796 companies that had formed a remuneration committee, 338 companies (43 per cent) met all three membership guidelines. The balance of 458 companies (57 per cent) had formed a remuneration committee, however the composition did not fully adopt the ASX remuneration committee recommendations. The descriptive statistics for the committee composition sample is also included in Table 6-1.

TABLE 6-1: DESCRIPTIVE STATISTICS OF DEPENDENT VARIABLES

Committee Formation: *Variable:* Remuneration Committee		
	%	*N*
• No Remuneration Committee	46.83	701
• Remuneration Committee Formed	53.17	796
Committee Composition: *Variable:* ASX Adopter		
	%	*N*
• Committee has three or more members	66.33	528
• Majority of members appointed are independent	65.70	523
• Independent chairperson appointed to the committee	74.12	590
• ASX Adopter Remuneration Committee	42.46	338
• Non Adopter Remuneration Committee	57.54	458

The few Australian studies that have considered remuneration committee structure have focused on large companies. To further facilitate comparison of the sample with the results from prior studies, a sub-sample of companies in the ASX 300 Index was considered. This sub-sample contains 154 companies, reflecting approximately 51 per cent of all companies included in the Index at 30 June 2008. The sub-sample does not include all companies included in the ASX 300 Index as companies included in the Index were captured by categories outlined in Table 5-6 and excluded from the full sample. Recall exclusion occurred if the company was a bank or listed trust, or was also listed in the US, or did not have a 30 June balance date, or was delisted during the period, or otherwise did not lodge an annual report or was not required to hold a shareholder vote on the annual remuneration report. Key data for the ASX 300 sub-sample and comparative data for the full sample are presented in Appendix 4. Of this sub-sample, 96 per cent of these companies had formed a remuneration committee. It is noted that eighty-four per cent of the committees had a majority of independent members. This reflects an increase in the number of companies forming a remuneration committee and in the proportion of independent committee members compared to earlier studies.

Carson (2002) examined the 500 largest companies listed on the ASX in 1996, where 57 per cent of companies had formed a remuneration committee. Subsequently, Cotter and Silvester (2003) and Windsor and Cybinski (2009) analysed the largest 200 and 300 ASX listed companies respectively in 1997 (Cotter and Silvester, 2003) and 2001 (Windsor and Cybinski, 2009). Cotter and Silvester (2003) found that 56 per cent of the remuneration committees were independent, and Windsor and Cybinski (2009) found that approximately 40 per cent of remuneration committees had 70 per cent or

more independent directors. Carson (2002), Cotter and Silvester (2003) and Windsor and Cybinski (2009) review data which pre-dates the introduction of the ASX Recommendations.

In relation to adoption of the ASX Recommendations on committee composition, 67 per cent of companies in the ASX 300 Index sub-sample met all three member guidelines. This adoption rate is higher than the adoption rate of 43 per cent for the full sample. The remaining 51 (33 per cent) remuneration committees in this sub-sample had not adopted all three member guidelines. The analysis of the descriptive statistics identifies that in large companies the formation of independent remuneration committees is increasing over time. The descriptive statistics for the ASX 300 sub-sample are presented at Appendix 4.

6.2.2 Independent and Control Variables

Table 6-2 reports the descriptive statistics for the independent variables and control variables included in the full sample. The full sample (n = 1,497) is used in the analysis of committee formation (Model 1). Agency costs are measured by the level of insider shareholding and institutional shareholding, CEO entrenchment, the number of business and geographical segments, growth, free cash flows and asset turnover. On average insiders, including large individual shareholders, as reflected in the ownership structure variable, own 20 per cent of the issued shares. Institutional shareholding is 18 per cent. Companies have an average of 1.6 business and 1.7 geographical segments. The average market to book ratio, a proxy for growth, is 2.6. The average asset turnover equates to 54 per cent. In the full sample 78 companies evidenced a change in CEO, 61 (78 per cent) of these companies had also formed a remuneration committee.

Board size is used to proxy for board capacity. Companies in the full sample have a mean board size of 4.61 directors.

TABLE 6-2: DESCRIPTIVE STATISTICS - INDEPENDENT AND CONTROL VARIABLES FULL SAMPLE

Panel A: Continuous Variables (N = 1,497)						
Variable	**Measure**	**Mean**	**Std Dev**	**Minimum**	**Median**	**Maximum**
Ownership Structure	Agency	19.85	19.40	0	14.08	100.00
Institutional Shareholding	Agency	18.10	19.71	0	0.12	0.93
Business Segments	Agency	1.55	1.07	1	1.00	9
Geo. Segments	Agency	1.66	1.12	1	1.00	11
Growth	Agency	2.61	3.25	-3.03	1.56	18.76
Free Cash Flow	Agency	5029741	69448212	-221360444	-1777609	471032404
Asset Turnover	Agency	0.54	1.51	-0.91	0.93	49.44
Board Size	Capacity	4.61	1.49	3	4.00	13
Leverage	Control	0.07	0.14	0.00	0.00	0.66
Governance Quality	Control	3.10	1.69	0.00	3.00	6.00
Company Size	Control	17.19	1.98	11.76	16.91	24.36
Company Age	Control	9.23	5.52	0	10.31	72

Panel B: Dichotomous Variables		**Full Sample**	**Committee Formed**		**No Committee**	
Variable	**Measure**	**N**	**N**	**%**	**N**	**%**
CEO Entrenchment	Agency	78	61	78.21	17	21.79
Big 4 Auditor	Control	590	421	71.36	169	28.64
Industry:						
- Energy	Control	179	66	36.87	113	63.13
- Telecom)	Control	27	18	66.67	9	33.33
- Utility	Control	19	12	63.15	7	36.85
- Materials	Control	533	209	39.21	324	60.79
- Industrial	Control	159	124	77.99	35	22.01
- Finance	Control	182	91	50.00	91	50.00
- Health Care	Control	138	95	68.84	43	31.16
- Consumer Discretionary	Control	122	88	72.13	34	27.87
- Information	Control	96	65	67.71	31	32.29
- Consumer Staples	Control	42	28	66.67	26	33.33
		1,497	796	53.17	701	46.83

Control variables included in the formation analysis are leverage, governance quality, company size, company age, the appointment of a big 4 auditor and industry effects. The average level of leverage was 7 per cent. The mean governance quality score was 3.10. The average number of years companies had been listed was 9 years, and the mean natural log of company size is 17.19. Of the 590 companies that had appointed a big 4 auditor, 421 (71 per cent) companies had also formed a remuneration committee. Companies included in the energy sector had the lower instance of remuneration committee formation (37 per cent) versus the industrial sector which had the highest instance of companies forming a remuneration committee (78 per cent).

Table 6-3 reports the descriptive statistics for the independent variables and control variables included in the sub-sample used in the analysis of committee composition (Model 2). This sub-sample (n = 796) includes all companies that have formed a remuneration committee. The same agency variables used in the formation analysis (Model 1) are also used in the committee composition analysis (Model 2). On average insiders, including large individual shareholders, own 17 per cent of issued shares. Institutional shareholding is 24 per cent. Companies have an average of 1.8 business and 1.8 geographical segments. The average market to book ratio is 2.5 and the average level of asset turnover is 69 per cent. Sixty-one companies evidenced a change in CEO.

Board size and board independence measure the board's capacity to adopt the ASX remuneration committee recommendations. Boards have a mean size of 5.1 directors. The mean proportion of independent directors is 51 per cent.

Control variables included in the composition analysis are the same variables as used in the committee formation analysis. The mean level of leverage was 10 per cent. The average governance quality score is 3.51. Company size as measured by the natural log of company assets is 17.94. The average length of time listed on the ASX is 10 years. Of the 421 companies that had appointed a big 4 auditor, 220 (52 per cent) companies adopted all three membership guidelines of the ASX remuneration committee recommendations. Companies included in the consumer staples (32 per cent) sector had the lowest instance of adoption of the ASX remuneration committee recommendations. The finance sector (53 per cent) had the highest adoption rate.

TABLE 6-3: DESCRIPTIVE STATISTICS - INDEPENDENT AND CONTROL VARIABLES FOR THE COMMITTEE COMPOSITION SUB SAMPLE

Panel A: Continuous Variables (N = 796)						
Variable	**Measure**	**Mean**	**Std Dev**	**Median**	**Minimum**	**Maximum**
Ownership Structure	Agency	17.20	19.29	9.09	0	100
Institutional Shareholding	Agency	23.60	21.96	0.19	0	0.93
Business Segments	Agency	1.76	1.24	1.00	1	9
Geo. Segments	Agency	1.80	1.21	1.00	1	8
Growth	Agency	2.51	3.00	1.54	-3.03	18.76
Free Cash Flow	Agency	12358569	9131822	-1275496	-221360444	471032404
Asset Turnover	Agency	0.69	0.88	0.414	-0.17	8.38
Board Size	Capacity	5.10	1.62	5.00	3	13
Board Independence	Capacity	0.51	0.24	0.50	0.00	1.00
Leverage	Control	0.10	0.15	0.00	0.00	0.66
Governance Quality	Control	3.51	1.15	4.00	0	5
Company Size (Ln)	Control	17.94	2.09	17.71	12.64	24.36
Company Age	Control	10.34	10.98	7.07	0	72

TABLE 6-3: DESCRIPTIVE STATISTICS – INDEPENDENT AND CONTROL VARIABLES FOR THE COMMITTEE COMPOSITION SUB-SAMPLE

Panel B: Dichotomous Variables		Sub-Sample	ASX Adopter		Non Adopter	
Variable	**Measure**	**N**	**N**	**%**	**N**	**%**
CEO Entrenchment	Agency	61	33	54.10	28	45.90
Big 4 Auditor	Control	421	220	52.26	201	47.74
Industry:						
- Energy	Control	66	30	45.45	36	54.55
- Telecom	Control	18	8	44.44	10	55.56
- Utility	Control	12	6	50.00	6	50.00
- Materials	Control	209	73	34.93	136	65.07
- Industrial	Control	124	60	48.39	64	51.61
- Finance	Control	91	48	52.75	43	47.25
- Health Care	Control	95	43	45.26	52	54.74
- Consumer Discretionary	Control	88	38	43.18	50	56.82
- Information	Control	65	23	35.39	42	64.61
- Consumer Staples	Control	28	9	32.14	19	67.86
		796	338	42.46	458	57.54

The descriptive statistics presented in Table 6-2 and Table 6-3 suggest that companies that form remuneration committees are on average, larger, more complex, have appointed a big 4 audit firm, have appointed a new CEO in the preceding two years, have higher levels of debt and have larger boards. The descriptive statistics suggest that industry factors are also relevant to a company's adoption of the ASX remuneration committee recommendations.

6.2.3 Tests of Normality

Various statistical techniques, for example, regression analysis and independent *t*-tests, require that continuous variables are normally distributed. The Kolmogorov-Smirnov statistic is used to assess normality of variable distribution. Table 6-4 depicts the results of the normality tests. The results provide evidence that the continuous variables used in committee formation model (Model 1) and the committee composition model (Model 2) are not normally distributed. Logistic regression analysis is used to test Hypotheses 1 through 5. Logistic regression is robust to non-normality in variables (Hair et al., 2010). For other tests for which the assumption of normality is important, non-parametric techniques are also employed.

TABLE 6-4: TESTS OF NORMALITY

	Committee Formation		**Committee Composition**	
	Kolmogorov-Smirnov		Kolmogorov-Smirnov	
Variable	Statistic	df	Statistic	df
Ownership Structure	0.10***	1305	0.10***	796
Institutional Shareholding	0.18***	1497	0.14***	796
CEO Entrenchment	0.54***	1497	0.54***	796
Business Segments	0.41***	1497	0.36***	796
Geo. Segments	0.37***	1497	0.35***	796
Growth	0.20***	1497	0.19***	796
Free Cash Flow	0.34***	1481	0.32***	796
Leverage	0.35***	1497	0.27***	796
Asset Turnover	0.35***	1497	0.21***	796
Board Size	0.20***	1497	0.20***	796
Company Size	0.07***	1497	0.05***	796
Governance Quality	0.13***	1497	0.17***	796
Big 4 Auditor	0.40***	1497	0.36***	796
Company Age	0.15***	1497	0.11***	796

TABLE 6-4: TESTS OF NORMALITY (CONT.)

	Committee Formation		Committee Composition	
	Kolmogorov-Smirnov		Kolmogorov-Smirnov	
Variable	Statistic	df	Statistic	df
Industry:				
- Energy	0.52***	1497	0.54***	796
- Telecom	0.54***	1497	0.54***	796
- Utility	0.53***	1497	0.54***	796
- Materials	0.42***	1497	0.46***	796
- Industrial	0.53***	1497	0.51***	796
- Finance	0.52***	1497	0.53***	796
Industry (Health Care)	0.53***	1497	0.52***	796
Industry (Consumer Discretionary)	0.54***	1497	0.53***	796
Industry (Information)	0.54***	1497	0.54***	796
Industry (Consumer Staples)	0.54***	1497	0.54***	796

*** denotes significance at $p < 0.01$

6.2.4 Bivariate Correlations

Table 6-5 reports the bivariate correlations between the independent variables for the full sample. Spearman's correlations are reported below the diagonal, with Pearson's product-moment correlations reported above the diagonal. As the data exhibit non-normal characteristics the discussion below reports the Spearman rank order correlations. The highest correlation is between board size and company size at 0.54. The next highest correlation is between company age and institutional shareholding at 0.53. These correlations indicate that larger more established companies are more likely to have a greater number of directors and institutional shareholdings. This view is supported by the descriptive statistics for the ASX 300 sub-sample[3], whereby the mean number of directors is 6.5 and the mean institutional shareholding is approximately 44 per cent compared with 4.61 and 18 per cent respectively for the full sample.

[3] Untabulated

Table 6-6 reports the bivariate correlations between the independent variables for the committee composition sub-sample. Spearman's correlations are reported below the diagonal, with Pearson's product moment correlations reported above the diagonal. The spearman correlations are discussed here. Consistent with the full sample, the highest correlation is between board size and company size at 0.59. The next highest correlations are between company size and leverage at 0.54 and between governance quality and board independence at 0.52. The correlations indicate that companies adopting the ASX remuneration committee recommendations are more likely to be larger, have larger boards, greater proportion of independent directors, higher leverage and higher governance quality (measured by adoption of nominated ASX Recommendations). As these companies have a greater proportion of independent directors their ability to adopt the ASX Recommendations is greater when compared against the governance quality of companies evidencing less capacity.

High correlations suggest problems with multicollinearity in the data (Pallant, 2007; Hair et al., 2010). In the full sample (Table 6-5), variables with correlations exceeding 0.40 are between governance quality and board size at 0.44, leverage and asset turnover at 0.47, company size and board size at 0.54, company size and big 4 auditor at 0.42, company size and governance quality at 0.43, company size and leverage at 0.47, and company age and institutional shareholding at 0.53. All other variables in the full sample report correlations below 0.40. In the committee composition sub-sample (Table 6-6) correlations above 0.40 are between asset turnover and free cash flow at 0.41, governance quality and board independence at 0.52, company size and institutional shareholdings at 0.48, company size and board size at

0.59 and company size and big 4 auditor at 0.42 and company size and leverage at 0.54, and company age and institutional shareholding at 0.47.

To examine whether the analyses are affected by multicollinearity, variance inflation factors (VIF) were determined for each variable. The VIF for each variable is reported at Table 6-5 and Table 6-6. The VIF values are below two for each variable except company size. The VIF for company size is 2.50 in the full sample and 2.82 for the sub-sample of companies that formed a remuneration committee. Overall, the VIF values are within the accepted guidelines of being less than 10, thereby indicating the efficacy of regression models are unlikely to be threatened by multicollinearity (Pallant, 2007; Hair et al., 2010).

TABLE 6-5: CORRELATION MATRIX – FULL SAMPLE

Model 1	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	VIF
(1) Ownership Structure		-0.33**	-0.14**	-0.13**	0.02	-0.22**	0.05	-0.09**	-0.20**	-0.19**	-0.22**	-0.08**	-0.32**	-0.16**	1.21
(2) Institutional Shareholding	-0.27**		0.26**	0.24**	0.01	0.20**	0.05*	0.08**	0.34**	0.31**	0.30**	0.20**	0.50**	0.31**	1.48
(3) Business Segments	-0.05	0.25**		0.22**	-0.11**	0.31**	0.10**	0.02	0.31**	0.19**	0.23**	0.29**	0.42**	0.19**	1.35
(4) Geo.Segments	-0.09**	0.22**	0.18**		-0.01	0.11**	0.03	0.04	0.20**	0.11**	0.13**	0.09**	0.23**	0.10**	1.11
(5) Growth	-0.02	0.02	-0.16**	0.07**		-0.03	-0.01	0.00	-0.02	-0.02	-0.04	-0.07**	-0.18**	-0.00	1.07
(6) Free Cash Flow	0.09**	0.07**	0.24**	0.02	-0.12**		0.06*	0.06*	0.25**	0.16**	0.18**	0.14**	0.34**	0.14**	1.22
(7) Asset Turnover	0.12**	0.24**	0.38**	0.12**	-0.08**	0.36**		0.00	0.07**	0.06*	0.13**	0.09**	0.08**	0.05	1.03
(8) CEO Entrenchment	-0.06*	0.07*	0.05	0.05*	0.02	0.03	0.09**		0.11**	0.09**	0.12**	0.07*	0.09**	-0.01	1.03
(9) Board Size	-0.08**	0.27**	0.22**	0.14**	0.03	0.06*	0.24**	0.13**		0.33**	0.43**	0.23**	0.61**	0.13**	1.72
(10) Big 4 Auditor	-0.16**	0.30**	0.18**	0.08**	-0.01	0.08**	0.21**	0.09**	0.31**		0.32**	0.17**	0.43**	0.16**	1.28
(11) Governance Quality	-0.18**	0.26**	0.21**	0.11**	-0.03	0.12**	0.30**	0.12**	0.44**	0.32**		0.24**	0.45**	0.07	1.41
(12) Leverage	0.01	0.22**	0.38**	0.10**	-0.12**	0.19**	0.47**	0.06*	0.29**	0.22**	0.27**		0.40**	0.11**	1.22
(13) Company Size	-0.20**	0.44**	0.35**	0.17**	-0.16**	0.10**	0.36**	0.08**	0.54**	0.42**	0.43**	0.47**		0.24**	2.50
(14) Company Age	-0.19**	0.53**	0.25**	0.15**	-0.01	0.11**	0.25**	0.02	0.11**	0.19**	0.10**	0.17**	0.27**		1.13

The correlation presented for dichotomous variables is the eta statistic. The Spearman's Correlation is reported below the diagonal and Pearson product-moment correlations above the diagonal. Industry correlations are not reported. ** , * denotes significance at 1 and 5 per cent respectively.

TABLE 6-6: CORRELATION MATRIX – COMPOSITION SUB-SAMPLE

Model 2	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	VIF
(1) Ownership Structure		-0.37**	-0.20**	-0.14**	0.02	-0.26**	0.11**	-0.13**	-0.25**	-0.30**	-0.24**	-0.26**	-0.16**	-0.38**	-0.22**	1.39
(2) Institutional Shareholding	-0.33**		0.26**	0.25**	0.01	0.21**	0.06	0.06	0.32**	0.25**	0.30**	0.22**	0.18**	0.51**	0.30**	1.50
(3) Business Segments	-0.10**	0.24**		0.25**	-0.14**	0.34**	0.14**	-0.01	0.31**	0.13**	0.21**	0.17**	0.27**	0.44**	0.17**	1.39
(4) Geo. Segments	-0.10*	0.23**	0.19**		-0.01	0.20**	0.07	0.01	0.20**	0.11**	0.11**	0.12**	0.10**	0.24**	0.10**	1.13
(5) Growth	0.00	0.02	-0.23**	0.04		-0.04	-0.06	-0.01	-0.01	0.04	-0.02	-0.05	-0.07*	-0.18**	-0.01	1.09
(6) Free Cash Flow	0.02	0.14**	0.27**	0.08*	-0.11**		0.08**	0.05	0.26**	0.15**	0.16**	0.19**	0.15**	0.38**	0.15**	1.29
(7) Asset Turnover	0.14**	0.15**	0.30**	0.12**	-0.08*	0.41**		-0.02	0.11**	0.05	0.10**	0.14**	0.14**	0.15**	0.08**	1.11
(8) CEO Entrenchment	-0.09*	0.06	0.01	0.00	-0.02	0.04	0.04		0.08*	0.07*	0.08*	0.08*	0.06	0.06	-0.02	1.03
(9) Board Size	-0.15**	0.30**	0.23**	0.13**	0.03	0.12**	0.17**	0.10**		0.19**	0.33**	0.35**	0.23**	0.63**	0.15**	1.74
(10) Board Independence	-0.31**	0.25**	0.12**	0.12**	0.01	0.10**	0.07	0.07*	0.18**		0.20**	0.51**	0.13**	0.28**	0.11**	1.50
(11) Big 4 Auditor	-0.23**	0.30**	0.20**	0.08*	-0.02	0.12**	0.15**	0.08*	0.32**	0.20**		0.24**	0.17**	0.42**	0.16**	1.26
(12) Governance Quality	-0.25**	0.23**	0.15**	0.10**	-0.03	0.18**	0.17**	0.09*	0.38**	0.52**	0.24**		0.20**	0.39**	0.02	1.60
(13) Leverage	-0.09*	0.21**	0.35**	0.12**	-0.15**	0.22**	0.40**	0.05	0.28**	0.11**	0.21**	0.21**		0.45**	0.07	1.26
(14) Company Size	-0.28**	0.48**	0.37**	0.17**	-0.13**	0.24**	0.29**	0.05	0.59**	0.27**	0.42**	0.39**	0.54**		0.25**	2.82
(15) Company Age	-0.28**	0.47**	0.19**	0.14**	-0.03	0.11**	0.16**	0.01	0.13**	0.14**	0.19**	0.03	0.12**	0.26**		1.15

The correlation presented for dichotomous variables is the eta statistic. The Spearman's Correlation is reported below the diagonal and Pearson product-moment correlations above the diagonal. Industry correlations are not reported. ** , * denotes significance at 1 and 5 per cent respectively.

6.2.5 Comparison of Groups

6.2.5.1 Remuneration Committee Formation

Independent *t*-tests were performed to compare the continuous independent variables for companies forming a remuneration committee and for those that had not formed a remuneration committee. Table 6-7 presents the results of the *t*-tests.

The results indicate that all continuous variables, excluding company growth have significant differences in the mean scores for the two groups. The results suggest that company and shareholder characteristics are systematically different for companies that form a committee compared to those that do not. Consistent with hypotheses stated in Chapter 4, as agency costs increase, the demand for the formation of a remuneration committee increases. Specifically as shareholder dispersion (H1a), institutional shareholding (H1c), company complexity (H3) and free cash flow (H4b) increase, the likelihood of formation of a remuneration committee also increases. Contrary to expectations, the results suggest that companies with higher insider shareholding (H1b) and growth opportunities (H4a) and lower asset turnover (H4c) are not more likely to form a remuneration committee. Additionally as board size (H5a) increases companies are more likely to form a remuneration committee. Other characteristics associated with committee formation are company size, leverage, and the length of time listed. These characteristics are incorporated into the study as control variables.

As the sample exhibits non-normal distribution (see section 6.2.3 above) Mann-Whitney *U* tests were performed to test the differences between the two groups. Consistent with the *t*-test results, non parametric tests revealed a significant difference for all continuous variables except ownership structure and company growth.

TABLE 6-7: *t*-TESTS AND MANN WHITNEY *U* TESTS - COMMITTEE FORMATION

Variable	Remuneration Committee				No Remuneration Committee				*t*-tests	*U* tests
	N	Mean	Std Deviation	Median	N	Mean	Std Deviation	Median	*t*	*U*
Ownership Structure (Ln)	719	2.23	1.57	2.60	586	2.44	1.33	2.68	2.61***	199900
Institutional Shareholding	796	23.59	21.96	18.53	701	11.89	14.48	7.58	-12.30***	192000***
Business Segments	796	1.76	1.24	1.00	701	1.31	0.77	1.00	-8.59***	222214***
Geo. Segments	796	1.80	1.21	1.00	701	1.51	0.98	1.00	-4.97***	248150***
Growth	796	2.51	3.00	1.54	701	2.72	3.51	1.59	1.21	278327
Free Cash Flow	788	12,358,569	91,318,229	-1,275,496	693	-3,303,759	26,470,085	-2,045,455	-4.60***	238573***
Leverage	796	0.10	0.15	0.00	701	0.04	0.11	0.00	-8.76***	199691***
Asset Turnover	796	0.69	0.88	0.41	701	0.38	1.99	0.13	-3.98***	166349***
Board Size	796	5.10	1.62	3.00	701	4.06	1.08	2.00	-14.70***	169479***
Company Size (Ln)	796	17.94	2.09	17.71	701	16.33	1.42	16.21	-17.38***	147140***
Governance Quality	796	3.99	1.43	4.00	701	2.10	1.36	2.00	-26.10*	100833***
Company Age	796	10.34	10.98	7.07	701	7.97	9.34	3.81	-4.51***	232888***

***,**,* denotes significance at 1, 5 and 10 per cent respectively

6.2.5.2 Remuneration Committee Composition

Independent *t*-tests were also performed to compare the continuous independent variables for companies that had adopted all three membership guidelines included in the ASX remuneration committee recommendations and those that had not. Companies included in the first group have formed a remuneration committee that has at least three members, the majority of which are independent and has an independent chairperson appointed. Companies included in the second group have formed a remuneration committee, however, the committee has not adopted all three of the ASX remuneration committee composition recommendations. This analysis uses the sub-sample of companies that have formed a remuneration committee. Of the 796 companies that had formed a remuneration committee, 338 companies had adopted all three of the membership guidelines included in the ASX remuneration committee recommendations, the balance of 458 companies had not. Table 6-8 presents the results of the *t*-tests.

The results indicate that all continuous variables, except growth and company age, are significantly different between companies that have adopted the ASX remuneration committee recommendations and those that have not adopted the ASX remuneration committee recommendations. Agency costs and board capacity are relevant to adoption of the ASX remuneration committee recommendations. As shareholding dispersion (H1a), institutional shareholding (H1c), company complexity (H3), growth opportunities (H4a), free cash flows (H4b), board size (H5a) and the proportion of independent directors (H5b) increase, the likelihood of companies adopting the ASX remuneration committee recommendations also increases. As insider shareholding increases (H1b), companies are less likely to adopt the ASX remuneration

TABLE 6-8: RESULTS OF INDEPENDENT *t*-TESTS AND MANN WHITNEY *U* TESTS - COMMITTEE COMPOSITION

Variable	ASX Adopter Remuneration Committee				Non Adopter Remuneration Committee				*t*-tests	*U* tests
	N	Mean	Std Deviation	Median	N	Mean	Std Deviation	Median	*t*	*U*
Ownership Structure (Ln)	310	1.85	1.80	2.21	409	2.51	1.31	2.74	5.43***	50765***
Institutional Shareholding	338	29.11	24.34	26.76	458	19.51	19.04	15.58	-6.02***	61461***
Business Segments	338	1.99	1.47	1.00	458	1.59	1.00	1.00	-4.28***	68791***
Geo. Segments	338	2.01	1.35	1.00	458	1.64	1.07	1.00	-4.19***	66071***
Growth	338	2.55	2.99	1.60	458	2.49	3.01	1.53	-0.28	75167
Free Cash Flow	336	28,922,427	1.274E8	-472,724	452	45,612	4,621,803	-1,731,108	-3.97***	67186***
Leverage	338	0.13	0.16	0.04	458	0.08	0.13	0.00	-4.56***	64455***
Asset Turnover	338	0.79	0.99	0.53	458	0.62	0.78	0.32	-2.78***	67192***
Board Size	338	5.59	1.58	5.00	458	4.73	1.55	4.00	-7.687***	51403***
Board Independence	338	65.32	16.19	66.67	458	40.78	23.46	40.00	-17.45***	30926***
Company Size (Ln)	338	18.79	2.18	18.73	458	17.32	1.78	17.17	-10.15***	45804***
Governance Quality	338	4.12	0.93	4.00	458	3.06	1.09	3.00	-14.75***	35685***
Company Age	338	10.41	11.67	7.07	458	10.29	10.46	7.06	0.14	76399

***,**,* denotes significance at 1, 5 and 10 per cent respectively. Sample size reduces due to missing data points with regarding to Ownership Structure and Free cash Flow variables.

committee recommendations. This result is inconsistent with the expectation articulated in H1(b).

Other company characteristics associated with adoption of the ASX remuneration committee recommendations are company size, governance quality, and leverage.

As the sample exhibits non-normal distribution (see section 6.2.3 above) Mann-Whitney *U* tests were performed to test the differences between the two groups. Consistent with the *t*-test results, non parametric tests revealed a significant difference for all continuous variables except company growth and the length of time listed on the ASX. In all cases, companies adopting the ASX remuneration committee recommendations evidenced higher concentration of the attributes of interest in this thesis, when compared to those companies with remuneration committees, which did not adopt the three membership guidelines included in the ASX remuneration committee recommendations. These attributes are institutional shareholding, complexity, free cash flow, debt, asset turnover, board size and independence, company size and governance quality.

6.3 MULTIVARIATE LOGISTIC REGRESSION ANALYSES

Multivariate logistic regression was performed to analyse the relation between agency costs and board capacity on the decision to adopt the ASX remuneration committee recommendations (Models 1 and 2).

Table 6-9 presents the results for the logistic multivariate regression analyses. Each model was run incorporating industry fixed effects. The full sample is used in the committee formation model (Model 1). The sample is reduced to 1,304 companies due to missing data. The committee formation model is statistically significant at $p < 0.01$

(Nagelkerke pseudo R Square value for the model is 52 per cent). The variables ownership structure (β = 0.17, Wald = 7.85) and institutional shareholdings (β = 0.01, Wald = 8.52) are statistically significant in the committee formation model at $p < 0.01$. The positive coefficients show that companies with greater levels of insider and institutional shareholding are more likely to have a remuneration committee.

The results provide support for Hypotheses 1b and 1c. Additionally CEO entrenchment (β = 0.64, Wald = 2.97) is marginally significant at $p < 0.10$. The positive coefficient means the company is more likely to form a remuneration committee if the CEO has changed. This result indicates that whilst CEO entrenchment is an indication of high agency costs, companies are less likely to address this issue by forming a remuneration committee. Consequently, whilst change in CEO is statistically significant, Hypothesis 2 is not supported. None of the other agency cost variables are statistically significant, therefore Hypothesis 1a (shareholder dispersion), Hypothesis 3 (business and geographical segments), Hypotheses 4a (growth), 4b (free cash flow), and 4c (asset turnover) are not supported. Hypothesis 5a (board size) is also not significant. Overall, the results of the committee formation model suggest that companies respond more to external agency demand influences related to shareholding characteristics rather than board capacity or other agency costs when deciding to voluntarily form a remuneration committee.

Table 6-9 also presents the results for the logistic multivariate regression analysis for remuneration committee composition as presented in Model 2. Companies that have formed a remuneration committee are used in Model 2. The sub-sample is reduced to 718 companies due to missing data. The committee composition model is statistically significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is

47 per cent). The variable board independence (β= 5.21, Wald = 71.75) is significant at $p < 0.01$ and the variable geographical segments (β = 0.15, Wald = 3.10) is marginally significant at $p < 0.10$. The positive coefficients mean the remuneration committee is more likely to adopt all three membership guidelines included in the ASX remuneration committee recommendations as the proportion of independent directors appointed to the board and the number of geographical segments increases.

This provides support for Hypotheses 3 and 5b. None of the other agency cost variables nor the remaining variable measuring board capacity are statistically significant. Therefore in the remuneration committee composition model (Model 2), ownership structure reflecting Hypotheses 1a (shareholder dispersion), 1b (insider shareholdings), and 1c (institutional shareholding), Hypothesis 2 (CEO entrenchment), Hypotheses 4a (growth), 4b (free cash flow) and 4c (asset turnover), and Hypothesis 5a (board size) are not supported. Overall, the results indicate that the availability of independent directors is the key predictor of the remuneration committee adopting all three guidelines included in ASX remuneration committee recommendations. This result is consistent with Cotter and Silvester (2003), although, this thesis uses a more comprehensive sample in the analysis.

Several control variables are also statistically significant in relation to remuneration committee formation and composition. In the committee formation model (Model 1) governance quality (β = 0.75, Wald = 166.24) and company size (β = 0.32, Wald = 25.24) are significant at $p < 0.01$, and big 4 auditor (β = 0.36, Wald = 4.87) is significant $p < 0.05$. In the committee composition model (Model 2) governance quality (β = 0.44, Wald = 17.66) and company age (β = -0.03, Wald = 9.97) are significant at

TABLE 6-9: LOGISTIC REGRESSION RESULTS - FORMATION AND COMPOSITION

Hypotheses 1 - 5			**Model 1 (Formation):** N=1,304	**Model 2 (Composition):** N = 718
Variable	Hypotheses	Expected Sign	Coefficient (Wald)	Coefficient (Wald)
Agency Characteristics:				
Ownership Structure	H1a, b	+	0.17 (7.85) ***	0.01 (0.02)
Institutional Shareholding	1c	+	0.01 (8.52) ***	0.00 (0.01)
CEO Entrenchment[4]	H2	+	0.64 (2.97) *	0.25 (0.48)
Business Segments	H3	+	0.01 (0.02)	0.03 (0.07)
Geo. Segments	H3	+	0.01 (0.02)	0.15 (3.10) *
Growth	H4a	+	0.01 (0.37)	0.04 (1.43)
Free Cash Flow	H4b	+	0.00 (0.07)	0.00 (0.08)
Asset Turnover	H4c	-	-0.02 (0.08)	0.14 (1.02)
Board Capacity:				
Board Size	H5a	+	0.06 (0.75)	0.10 (1.59)
Board Independence	H5b	+	N/A	5.21 (71.75) ***
Controls:				
Company Size (LN)		+	0.32 (25.24) ***	0.24 (8.14) **
Governance Quality[5]		+	0.75 (166.24) ***	0.44 (17.66) ***
Leverage		+/-	-0.00 (0.00)	-0.25 (0.12)
Big 4 Auditor		+	0.36 (4.87) **	0.15 (0.52)
Company Age		+/-	0.00 (0.10)	-0.03 (9.97) ***
Nagelkerke R Square			0.52***	0.47***

***,**,* denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.

Model 1 (Formation):

$Remuneration\ Committee = \beta_0 + \beta_1 Ownership\ Structure + \beta_2 Institutional\ Shareholding + \beta_3 CEO\ Entrenchment + \beta_4 Business\ Segments + \beta_5 Geo\ Segments + \beta_6 Growth + \beta_7 Free\ Cash\ Flow + \beta_8 Asset\ Turnover + \beta_9 Board\ Size + \beta_{10} Company\ Size + \beta_{11} Governance\ Quality + \beta_{12} Leverage + \beta_{13} Big4\ Auditor + \beta_{14} Company\ Age + \beta_{15} Industry + \varepsilon$

Model 2(Composition)

$ASX\ Adopter = \beta_0 + \beta_1 Ownership\ Structure + \beta_2 Institutional\ Shareholding + \beta_3 CEO\ Entrenchment + \beta_4 Business\ Segments + \beta_5 Geo.\ Segments\ \beta_6 Growth + \beta_7 Free\ Cash\ Flow + \beta_8 Asset\ Turnover + \beta_9 Board\ Size + \beta_{10} Board\ Independence + \beta_{11} Company\ Size + \beta_{12} Governance\ Quality + \beta_{13} Leverage + \beta_{14} Big4\ Auditor + \beta_{15} Company\ Age + \beta_{16} Industry + \varepsilon$

[4] As a robustness test, Models 1 and 2 were re-performed with CEO tenure used as an alternative measure of CEO entrenchment. The amended models are robust to the inclusion of alternate measure of CEO entrenchment.

[5] As a robustness test, Models 1 and 2 were re-performed with the individual governance components substituted for the governance quality composite score. The amended models remained robust to the use of individual measures of company governance.

Where:

Dependent Variables:

Model 1 (Formation):

Remuneration Committee = Dichotomous variable, coded one (1) if the company has formed a remuneration committee as at 30 June 2008, and zero (0) otherwise.

Model 2(Composition):

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition as at 30 June 2008, and zero (0) otherwise.

Independent and Control Variables:

Ownership Structure (shareholder dispersion and insider shareholding) = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.

Business Segments = Number of business segments in which the company operates, as disclosed in the 2008 financial report.

Geo. Segments = Number of geographical segments in which the company operates, as disclosed in the 2008 financial report.

Growth = Book value of equity divided by market value of equity as at 30 June 2008, winsorised at 1 per cent.

Free Cash Flow = Difference between the gross cash flow from operations less gross investment as at 30 June 2008, winsorised at 1 per cent.

Asset Turnover = Operating revenue divided by average total assets, as at 30 June 2008.

Board Size = Number of directors appointed to the Board as at 30 June 2008.

Board Independence = Number of independent directors divided by the number of directors as at 30 June 2008.

Company Size = Natural log of total assets, as at 30 June 2008.

Governance Quality = Score determined by adding one point for adoption of nominated ASX governance recommendations as disclosed in the 2008 financial report.

Leverage = Total assets divided by total liabilities as at 30 June 2008, winsorised at 1 per cent.

Big 4 Auditor = Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm as at 30 June 2008, and zero (0) otherwise.

Company Age = The number of years since the company listed on the ASX.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

$p < 0.01$ and company size ($\beta = 0.24$, Wald = 8.14) is significant at $p < 0.05$. Leverage was not significant in either model, whilst big 4 auditor was statistically insignificant in the composition model, and company age was not significant in the committee formation model. Governance quality has the highest explanatory power with regard to remuneration committee formation (Model 1) whilst the availability of independent directors has the highest explanatory power with regard to remuneration committee composition (Model 2).

The results for the controls variables are consistent with expectations. Larger and older companies have more capacity to implement governance *best practice* practices. The adoption of other *best practice* governance practices, for example constituting other governance committees and appointing an independent chair, are a positive signal as to whether the company also chooses to adopt the ASX remuneration committee recommendations.

Therefore in relation to the first research question (1a), the analysis has identified that responding to agency costs is significant to the decision to form a remuneration committee. In particular, agency related demand associated with shareholder characteristics are associated with the formation of a remuneration committee. Change in CEO is also marginally associated with the formation of a remuneration committee.

Evidence is also presented regarding research question 1b. Board capacity measured by the proportion of independent directors is highly significant to the decision to adopt the ASX remuneration committee recommendations regarding its composition.

6.4 ADDITIONAL ANALYSES

6.4.1 Composition Analysis

Further logistic regressions are performed to analyse the individual aspects of the ASX remuneration committee composition recommendations. A further three dichotomous variables were created to analyse committee composition in more detail. The first variable takes a value of one (1) if *committee size* is at least three directors, and zero (0) otherwise. The second variable *committee independence* is coded one (1) if the company has a majority of members that are independent directors, and zero (0) otherwise. The third variable indicates whether the committee has an *independent chair*, and is coded one (1) if the chairperson is an independent director and zero (0) otherwise. Independent variables and control variables are the same as those used in Model 2. Table 6-10 reports the results.

The model for the regression with the indicator for committee size is significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is 27 per cent). Board size ($\beta = 0.36$, Wald = 19.68) is significant at $p < 0.01$. None of the agency cost variables (ownership structure, institutional shareholding, CEO entrenchment, business segments, geographical segments, growth, asset turnover or free cash flow) are statistically significant. The other variable measuring board capacity, board independence, is not significant. Of the control variables, governance quality ($\beta = 0.39$, Wald 16.53) and company size ($\beta = 0.21$, Wald = 6.94) are significant at $p < 0.01$. The positive coefficient means that as board size, the number of ASX Recommendations adopted and company size increase, the likelihood the company also forms a remuneration committee with at least three members also increases. Leverage, big 4

auditor, and company age are statistically insignificant. Board capacity is the clear driver for the remuneration committee having at least three members.

The model for adoption of the committee independence recommendation is statistically significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is 66 per cent). Board capacity and agency costs are significant. Board capacity measured by board size ($\beta = 0.29$, Wald = 7.78) and board independence ($\beta = 10.92$, Wald = 132.83) are significant at $p < 0.01$. Of the agency cost variables, business segments ($\beta = 0.24$, Wald = 3.61) and geographical segments ($\beta = 0.18$, Wald = 2.79) are marginally significant at $p < 0.10$. The remaining agency cost variables, ownership structure, institutional shareholding, CEO entrenchment, growth, asset turnover and free cash flow are statistically insignificant.

Of the control variables, company age ($\beta = -0.02$, Wald = 4.00) is significant at $p < 0.05$ and governance quality ($\beta = 0.23$, Wald = 3.48) is marginally significant at $p < 0.10$. The positive coefficients mean as board size, the number of independent board members, and company complexity increase, the likelihood the company forms an independent remuneration committee also increases. Additionally the results from the control variables indicate that as the number of ASX Recommendations adopted increases, the likelihood the company also forms an independent remuneration committee also increases. However, the negative coefficient for company age means that as the length of time listed on the ASX increases, the lower the likelihood that the company forms an independent remuneration committee. Overall, the analysis highlights that board capacity is the key determinant of committee independence.

The final regression examines factors relevant to the appointment of an independent chair to the remuneration committee. The model is significant at $p < 0.01$

(Nagelkerke pseudo R Square value for the model is 50 per cent). Consistent with the preceding analysis, board independence representing the availability of independent directors (β = 5.95, Wald = 85.41) is significant at $p < 0.01$. Whilst board size is marginally significant (β = -0.17, Wald = 3.40) at $p < 0.10$, the negative coefficient suggests that as board size increases the likelihood the company appoints an independent committee chairperson decreases.

Of the agency variables, CEO entrenchment (β = 1.01, Wald = 4.04) is significant at $p < 0.05$. Recall that the CEO entrenchment variable measures whether a change in CEO has occurred. Therefore the positive coefficient suggests that where there has been a change in CEO, the company is more likely to appoint an independent chair to the remuneration committee. The remaining agency cost variables, ownership structure, institutional shareholding, business segments, geographical segments, growth, asset turnover and free cash flows are not statistically significant.

Governance quality (β =0.45, Wald = 14.77) is significant at $p < 0.01$. The remaining control variables, big 4 auditor, leverage, company size and company age are not significant. Overall, the results suggest that board capacity is the key driver to appointing an independent chairperson to the remuneration committee.

The results presented in Table 6-10 suggest that the availability of independent board members is the key determinant of whether a company forms an independent remunerating committee and appoints an independent committee chairperson. Board size is more relevant to the appointment of at least three members to the committee. The results support the findings presented in the main analysis at Section 6.3. That is, board capacity is critical to adoption of the ASX remuneration committee recommendations.

TABLE 6-10: DECOMPOSED REMUNERATION COMMITTEE COMPOSITION ANALYSIS

Model 2 (Composition):	Committee Size	Committee Independence	Independent Chair
N = 718	Coefficient (Wald)	Coefficient (Wald)	Coefficient (Wald)
Ownership Structure	0.04 (0.26)	0.08 (0.75)	-0.10 (1.26)
Institutional Shareholding	-0.00 (0.45)	-0.01 (1.77)	0.01 (2.28)
CEO Entrenchment	-0.14 (0.17)	0.30 (0.38)	1.01 (4.04)**
Business Segments	0.03 (0.07)	0.24 (3.61)*	-0.18 (2.41)
Geo. Segments	0.05 (0.36)	0.18 (2.79)*	0.17 (2.32)
Growth	0.05 (2.05)	-0.01 (0.03)	0.04 (1.05)
Asset Turnover	0.11 (0.64)	0.26 (2.15)	-0.05 (0.12)
Free Cash Flow	0.00 (0.16)	0.00 (2.67)	0.00 (0.02)
Board Size	0.36 (19.68)***	0.29 (7.78)***	-0.17 (3.40)*
Board Independence	0.25 (0.32)	10.92 (132.83)***	5.95 (85.41)***
Company Size	0.21 (6.94)***	0.09 (0.68)	0.13 (1.47)
Governance Quality	0.39 (16.53)***	0.23 (3.48)*	0.45 (14.77)***
Leverage	-0.32 (0.20)	0.38 (0.16)	1.33 (1.90)
Big 4 Auditor	-0.08 (0.16)	0.09 (0.12)	-0.02 (0.01)
Company Age	-0.01 (1.85)	-0.02 (4.00)**	-0.01 (1.37)
Nagelkerke R Square	0.27***	0.66***	0.50***

***,**,* denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented

Model 2(Composition)

$$DV_{1,2,3} = \beta_{0} + \beta_1 Ownership\ Structure + \beta_2 Institutional\ Shareholding + \beta_3 CEO\ Entrenchment + \beta_4 Business\ Segments + \beta_5 Geo.\ Segments\ \beta_6 Growth + \beta_7 Free\ Cash\ Flow + \beta_8 Asset\ Turnover + \beta_9 Board\ Size + \beta_{10} Board\ Independence + \beta_{11} Company\ Size + \beta_{12} Governance\ Quality + \beta_{13} Leverage + \beta_{14} Big4\ Auditor + \beta_{15} Company\ Age + \beta_{16} Industry + \varepsilon$$

Where:

Dependent Variables:

DV_1= Dichotomous variable, coded one (1) if the company has formed a remuneration committee consisting of at least three members, and zero (0) otherwise.

DV_2= Dichotomous variable, coded one (1) if the company has formed a remuneration committee consisting of a majority of independent directors, and zero (0) otherwise.

DV_3= Dichotomous variable, coded one (1) if the company has appointed an independent chairperson to the remuneration committee, and zero (0) otherwise.

Independent and Control Variables:

Ownership Structure (shareholder dispersion and insider shareholding) = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.

Business Segments = Number of business segments in which the company operates, as disclosed in the 2008 financial report.

Geo. Segments = Number of geographical segments in which the company operates, as disclosed in the 2008 financial report.

Growth = Book value of equity divided by market value of equity as at 30 June 2008, winsorised at 1 per cent.

Free Cash Flow = Difference between the gross cash flow from operations less gross investment as at 30 June 2008, winsorised at 1 per cent.

Asset Turnover = Operating revenue divided by average total assets, as at 30 June 2008.

Board Size = Number of directors appointed to the Board as at 30 June 2008.

Board Independence = Number of independent directors divided by the number of directors as at 30 June 2008.

Company Size = Natural log of total assets, as at 30 June 2008.

Governance Quality = Score determined by adding one point for adoption of nominated ASX governance recommendations as disclosed in the 2008 financial report.

Leverage = Total assets divided by total liabilities as at 30 June 2008, winsorised at 1 per cent.

Big 4 Auditor = Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm as at 30 June 2008, and zero (0) otherwise.

Company Age = The number of years since the company listed on the ASX.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

6.4.2 Company Size Analysis

It is generally accepted in the literature that company size is a significant explanatory variable in governance and remuneration research. The analysis in the preceding section also identified that company size is significant in Model 1 (committee formation), Model 2 (committee composition) and in the "committee size" analysis of

decomposed Model 2. Therefore, further analysis based on company size is conducted. Three company size classifications are used. Companies are categorized as large, small to mid-size or small, based on asset size. Australian research has focused on samples based on the ASX 200, 300 and 500 indices. Therefore, companies are classified as large if they are the largest 500 companies included in the sample. All companies excluding members of the ASX 300 Index are included in the small to mid-size company analysis. Finally, the small company analysis includes the five hundred smallest companies by asset size. Due to the definitions of company size adopted, data sub-sets are overlapping and are treated as three distinct sub-samples in the analyses.

Analysis of large companies is relevant not only from a research perspective, but also from a policy perspective. Revised ASX Listing Rule 12.8, effective from 1 July 2011 requires companies included within the ASX 300 Index to form a remuneration committee consisting solely of non-executive directors. Whilst the revised listing rule does not mandate adoption of the ASX remuneration committee recommendations regarding committee size and independence, companies are still required on an *if not, why not* basis to explain non-adoption. The review of the 2008 companies indicates that the majority of companies included in the sample analysed had adopted the requirements of the amended listing rule some three years prior to its implementation. Although the new rules only apply to the ASX 300, consideration as to whether this should be extended to the ASX 500 remains an open policy question. Therefore the large company sub-sample focuses on the largest 500 companies included in the sample.

A summary of the percentage of companies included in each category that had formed a remuneration committee and adopted the ASX remuneration committee recommendations regarding composition is included at Table 6-11 below. Adoption of

the ASX remuneration committee recommendations is highest for larger companies and decreases as company size decreases. The results suggest that larger companies either have greater capacity, higher demand for adoption of the ASX Recommendations, or both. The Australian Productivity Commission (2010) and the ASX (2010) have identified that larger companies inherently have a greater capacity to facilitate adoption of the ASX Recommendations. Broadly, existing research in the US, UK and Australia has also identified that larger companies are associated with the presence of a remuneration committee. However, little examination of small and medium sized companies has been undertaken.

TABLE 6-11: COMPANY SIZE SUMMARY- COMMITTEE FORMATION AND COMPOSITION

Company Category	Formation	Composition
Largest 500 Companies	79%	58%
Small - Mid Size Companies	56%	36%
Small Companies	33%	24%

To facilitate comparison of data with the results from prior studies, a sub-sample of the largest five hundred companies included in the sample, measured by asset size is examined. This group had total assets ranging from $50,903,000 to $37,306,000,000. As depicted in Table 6-11 above, 79 per cent of these companies had formed a remuneration committee, 58 per cent of which satisfied all three membership guidelines included in the ASX remuneration committee recommendations.

The results of the analyses of committee formation and composition are presented in Table 6-12. Model 1 is discussed first and concerns remuneration committee formation. The largest five hundred companies included in the full sample reduce to 471 companies due to missing data.

The large company committee formation model is significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is 48 per cent). The analysis of committee formation characteristics in the large company sample indicates agency costs related to ownership structure ($\beta = 0.28$, Wald = 7.81) and institutional shareholding ($\beta = 0.02$, Wald = 7.87) are significant at $p < 0.01$. The other agency costs, CEO entrenchment, business segments, geographical segments, growth, free cash flow and asset turnover are not statistically significant. Board size ($\beta = 0.20$, Wald = 2.98) is marginally significant at $p < 0.10$. The positive coefficients mean that as levels of insider shareholding and institutional shareholding increase, and as board size increases so does the likelihood of the company forming a remuneration committee. Of the control variables, governance quality ($\beta = 0.77$, Wald = 49.31) is significant at $p < 0.01$ and company size ($\beta = 0.40$, Wald = 4.94) is significant at $p < 0.05$. The positive coefficients of the control variables mean that as adoption of the ASX Recommendations and company size increase, the likelihood the company forms a remuneration committee also increases. Big 4 auditor, leverage and company age are statistically insignificant. Therefore agency costs related to shareholder characteristics and board capacity are relevant to voluntary formation of a remuneration committee in large companies.

In an earlier study of large Australian companies by Carson (2002), institutional shareholding and big six auditor were found to be relevant to the committee formation decision in large companies. Whilst the results of the main analysis are consistent with Carson's (2002) findings, the presence of Big 4 auditor is not statistically significant in the large company sample. Carson (2002) also identified that board size, company size and leverage were associated with the presence of a remuneration committee. The

results are largely consistent with Carson's (2002) findings in this regard, however leverage is statistically insignificant.

The small to mid-size company analysis includes all companies included in the full sample excluding members of the ASX 300 Index. These companies had total assets ranging from $127,769 to $14,188,000,000. The total number of companies included in this analysis was 1,343 companies, which reduced to 1,158 due to missing data. The results of the committee formation analysis (Model 1) are presented in Table 6-12. The model is significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is 46 per cent).

The agency variables ownership structure ($\beta = 0.15$, Wald = 5.60) and institutional shareholding ($\beta = 0.01$, Wald = 5.11) are significant at $p < 0.05$. The other agency cost variables of CEO entrenchment, business segments, geographical segments, growth, free cash flow and asset turnover are not statistically significant. The board capacity variable measured by board size is also not statistically significant. Control variables governance quality ($\beta = 0.74$, Wald = 156.31) and company size ($\beta = 0.27$, Wald = 16.42) are significant at $p < 0.01$, and the presence of a big 4 auditor ($\beta = 0.32$, Wald = 3.71) is significant at $p < 0.10$. Leverage and company age are statistically insignificant. Consequently, after controlling for company characteristics, shareholder characteristics are incrementally relevant to the decision to form a remuneration committee. This result is consistent with the results achieved for the full sample as reported in section 6.3.

The small company sample included the smallest 500 companies, based on total assets, was extracted from the full sample. The small companies group reported total assets ranging from $127,769 to $10,179,346. This sample reduced to 392 due to

missing data. Approximately one third of this sample (130 companies) had formed a remuneration committee. The small company committee formation model (Model 1) is significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is 38 per cent). Asset turnover ($\beta = -0.37$, Wald = 3.33) is the only agency variable of interest that is significant at $p < 0.10$. Ownership structure, institutional shareholding, CEO entrenchment, business segments, geographical segments, growth and free cash flow are statistically insignificant. Board capacity measured as board size, is also statistically insignificant in explaining the presence of a remuneration committee. Control variables that are significant are governance quality ($\beta = 0.81$, Wald = 58.27) at $p < 0.01$, and company size ($\beta = 0.52$, Wald = 6.27) and company age ($\beta = -0.00$, Wald = 0.02) at $p < 0.05$. Big 4 auditor and leverage are statistically insignificant. The results indicate that as overall agency costs increase, the company is more likely to form a remuneration committee.

Model 2 relates to remuneration committee composition and the results of the analysis (refer to Table 6-12) follow. Of the largest 500 companies, 392 companies had formed a remuneration committee, this sub-sample reduced to 368 companies due to missing data. The large company committee composition model is significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is 45 per cent). Board capacity represented by board independence ($\beta = 5.71$, Wald = 39.97) is significant at $p < 0.01$. The positive coefficient indicates that as the number of independent directors appointed to the board increases, the likelihood the company adopts the ASX remuneration committee recommendations also increases. The agency cost variables, ownership structure, institutional shareholding, CEO entrenchment, business segments,

geographical segments, growth, free cash flow and asset turnover are not significant. The second measure of board capacity, board size, is also statistically insignificant.

Control variables, governance quality (β = 0.45, Wald = 9.13) and company age (β = -0.03, Wald = 8.29) are significant at $p < 0.01$, and company size (β = 0.30, Wald = 3.56) is significant at $p < 0.10$. The positive coefficients indicate that as the adoption of other recommendations included in the ASX Recommendations and company size increase, the likelihood the company adopts all three guidelines included in the ASX remuneration committee recommendations also increases for large companies. The negative coefficient suggests that as the length of time listed on the ASX increases, large companies are less likely to adopt the ASX remuneration committee composition guidelines. The remaining control variables, big 4 auditor and leverage are not statistically significant. The association between board independence and committee independence of large companies is consistent with the results of the main analysis and with the results of extant research conducted in the US (Kesner, 1988; Vafeas, 2000) and in Australia (Cotter and Silvester, 2003).

Overall the results suggest that in large companies the availability of independent directors is the clear driver of the composition of the committee satisfying all three membership guidelines included in the ASX remuneration committee recommendations.

Approximately 56 per cent (648 companies) of small to mid-size company group had formed a remuneration committee. In the remuneration committee composition regression, the sub sample of 648 small to mid-size companies reduced to 576 due to missing data. Of the 576 companies, 36 per cent (210 companies) (see Table 6-11) adopted all three membership guidelines included in the ASX remuneration committee

recommendations. The remaining 366 companies had formed a remuneration committee, the constitution of which was inconsistent with the three membership guidelines included in the ASX remuneration committee recommendations.

The composition regression (Model 2) for small to mid-size companies is significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is 68 per cent). Of the variables of interest, board capacity measured by board size ($\beta = 0.27$, Wald = 10.32) and board independence ($\beta = 5.17$, Wald = 61.67) are significant at $p < 0.01$. The positive coefficients indicate that as board size and the number of independent directors appointed to the board increases in small mid-sized companies, the likelihood that the company adopts all three membership guidelines included in the ASX remuneration committee recommendations increases. All agency variables, ownership structure, institutional shareholding, CEO entrenchment, business segments, geographical segments, growth, free cash flow and asset turnover are statistically insignificant. Control variables governance quality ($\beta = 0.38$, Wald = 11.22) and company age ($\beta = -0.03$, Wald = 6.28) are statistically significant at $p < 0.01$. Big 4 auditor, leverage and company size are statistically insignificant.

As with other analysis investigating committee composition, board independence is the key explanatory variable. This result is also consistent with the analysis included at Section 6.3.

Of the 130 small companies that had formed a remuneration committee, 24 per cent (31 companies) (see Table 6-11) adopted the ASX remuneration committee recommendations regarding committee composition. The remaining 99 companies had formed a remuneration committee, the constitution of which was not consistent with the three membership guidelines included in the ASX remuneration committee

recommendations. The small company committee composition model (Model 2) is significant at $p < 0.01$ (Nagelkerke pseudo R Square value for the model is 59 per cent).

As reported in Table 6-12, of the agency variables, the only significant variable is ownership structure ($\beta = -0.50$, Wald = 3.58) at $p = < 0.10$. This indicates that the higher the insider shareholding, the less likely small companies form a remuneration committee satisfying all three membership guidelines included in the ASX remuneration committee recommendations. Institutional shareholding, CEO entrenchment, business segments, geographical segments, growth, free cash flow and asset turnover are statistically insignificant.

Board capacity, being board size ($\beta = 1.15$, Wald = 7.44) and board independence ($\beta = 9.25$, Wald = 15.48) are significant at $p < 0.01$. As with the main analysis investigating committee composition, board independence is the key explanatory variable for small companies. None of the control variables, big 4 auditor, leverage, governance quality, company size and company age are statistically significant. Consequently as board size and the number of independent board members increase in small companies, so does the likelihood the remuneration committee adopts all three membership guidelines detailed in the ASX remuneration committee recommendations.

In summary, the company size analysis suggests that determinants of adoption of the ASX remuneration committee recommendations vary depending on company size. Governance quality, that is adoption of other recommendations included in the ASX Recommendations, is the largest signal as to whether companies voluntarily form a remuneration committee. This held true regardless of company size. Company size is the next highest contributor with regard to remuneration committee formation for small

and small to mid-size companies, however not for large companies. Board capacity, in particular board size, is the only measure of board capacity that is statistically significant in the committee formation analysis, and is only statistically significant in large companies. Board capacity is not statistically significant in small and small to mid-size companies with regard to the decision to form a remuneration committee.

Agency costs related to insider shareholding and institutional shareholding are statistically significant for large and mid-size companies. These characteristics are insignificant for the five hundred smallest listed companies. With regard to the composition of remuneration committees, the availability of independent directors represents the largest contribution to full adoption of the ASX remuneration committee recommendations, regardless of company size.

TABLE 6-12: COMPANY SIZE FORMATION AND COMPOSITION ANALYSIS

	Model 1 (Formation):			**Model 2 (Composition):**		
	Large (N= 471)	Small-Mid (N= 1,158)	Small (N = 392)	**Large** (N = 368)	**Small-Mid** (N = 576)	**Small** (N = 130)
Variable	Coefficient (Wald)	Coefficient (Wald)	Coefficient (Wald)	Coefficient (Wald)	Coefficient (Wald)	Coefficient (Wald)
Ownership Structure	0.28 (7.81)***	0.15 (5.60)**	0.02 (0.02)	0.00 (0.00)	0.07 (0.57)	-0.50 (3.58)*
Institutional Shareholding	0.02 (7.87)***	0.01 (5.11)**	0.00 (0.05)	-0.00 (0.09)	-0.00 (0.07)	0.01 (0.27)
CEO Entrenchment	1.64 (2.13)	0.50 (1.77)	0.34 (0.30)	-0.54 (1.07)	0.20 (0.41)	0.80 (0.69)
Business Segments	0.01 (0.00)	0.02 (0.05)	-0.11 (0.24)	0.06 (0.28)	0.11 (0.99)	0.55 (1.05)
Geo. Segments	-0.00 (0.00)	0.02 (0.05)	0.01 (0.00)	0.13 (1.41)	0.04 (1.16)	0.23 (0.46)
Growth	0.02 (0.12)	0.01 (0.28)	0.04 (1.98)	-0.00 (0.00)	0.04 (1.16)	0.04 (0.38)
Free Cash flow	0.00 (0.01)	0.00 (1.41)	0.00 (1.66)	0.00 (0.04)	0.00 (0.03)	0.00 (0.01)
Asset Turnover	-0.10 (0.30)	-0.05 (0.21)	-0.37 (3.33)*	0.06 (0.10)	0.14 (1.08)	0.48 (1.56)
Board Size	0.20 (2.98)*	0.06 (0.77)	-0.23 (2.30)	0.03 (0.11)	0.27 (10.32)***	1.15 (7.44)***
Board Independence	N/A	N/A	N/A	5.71 (39.97)***	5.17 (61.67)***	9.25 (15.48)***
Company Size	0.40 (4.94)**	0.27 (16.42)***	0.52 (6.27)**	0.30 (3.56)*	0.04 (1.11)	0.34 (0.55)
Governance Quality	0.77 (49.31)***	0.74 (156.31)***	0.81 (58.27)***	0.45 (9.13)***	0.38 (11.22)***	0.13 (0.19)
Leverage	-0.33 (0.13)	-0.13 (0.04)	0.95 (0.58)	-0.56 (0.38)	-0.02 (0.00)	1.85 (0.74)
Big 4 Auditor	0.24 (0.61)	0.32 (3.71)*	-0.06 (0.03)	0.42 (1.20)	0.23 (1.13)	0.27 (0.15)
Company Age	0.00 (0.05)	0.02 (0.08)	-0.00 (0.02)**	-0.03 (8.29)***	-0.03 (6.28)***	-0.05 (1.04)
Nagelkerke R Square	0.48***	0.46***	0.38***	0.45***	0.68***	0.59***

***,**,* denotes significance at 1, 5 and 10 per cent respectively. Industry effects not reported.

Model 1 (Formation): *Remuneration Committee* $= \beta_{0} + \beta_1$*Ownership Structure* $+ \beta_2$*Institutional Shareholding* $+ \beta_3$*CEO Entrenchment* $+ \beta_4$*Business Segments* $+ \beta_5$*Geo. Segments* $+ \beta_6$*Growth* $+ \beta_7$*Free Cash Flow* $+ \beta_8$*Asset Turnover* $+ \beta_9$*Board Size* $+ \beta_{10}$*Company Size* $+ \beta_{11}$*Governance Quality* $+ \beta_{12}$*Leverage* $+ \beta_{13}$*Big4 Auditor* $+ \beta_{14}$*Company Age* $+ \beta_{15}$*Industry* $+ \varepsilon$

Model 2(Composition) *ASX Adopter* $= \beta_{0} + \beta_1$*Ownership Structure* $+ \beta_2$*Institutional Shareholding* $+ \beta_3$*CEO Entrenchment* $+ \beta_4$*Business Segments* $+ \beta_5$*Geo. Segments* β_6*Growth* $+ \beta_7$*Free Cash Flow* $+ \beta_8$*Asset Turnover* $+ \beta_9$*Board Size* $+ \beta_{10}$*Board Independence* $+ \beta_{11}$*Company Size* $+ \beta_{12}$*Governance Quality* $+ \beta_{13}$*Leverage* $+ \beta_{14}$*Big4 Auditor* $+ \beta_{15}$*Company Age* $+ \beta_{16}$*Industry* $+ \varepsilon$

Where:

Dependent Variables:

Model 1 (Formation):

Remuneration Committee = Dichotomous variable, coded one (1) if the company has formed a remuneration committee as at 30 June 2008, and zero (0) otherwise.

Model 2(Composition):

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition as at 30 June 2008, and zero (0) otherwise.

Independent and Control Variables:

Ownership Structure (shareholder dispersion and insider shareholding) = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.

Business Segments = Number of business segments in which the company operates, as disclosed in the 2008 financial report.

Geo. Segments = Number of geographical segments in which the company operates, as disclosed in the 2008 financial report.

Growth = Book value of equity divided by market value of equity as at 30 June 2008, winsorised at 1 per cent.

Free Cash Flow = Difference between the gross cash flow from operations less gross investment as at 30 June 2008, winsorised at 1 per cent.

Asset Turnover = Operating revenue divided by average total assets, as at 30 June 2008.

Board Size = Number of directors appointed to the Board as at 30 June 2008.

Board Independence = Number of independent directors divided by the number of directors as at 30 June 2008.

Company Size = Natural log of total assets, as at 30 June 2008.

Governance Quality = Score determined by adding one point for adoption of nominated ASX governance recommendations as disclosed in the 2008 financial report.

Leverage = Total assets divided by total liabilities as at 30 June 2008, winsorised at 1 per cent.

Big 4 Auditor = Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm as at 30 June 2008, and zero (0) otherwise.

Company Age = The number of years since the company listed on the ASX.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

6.4.3 Shareholder Dissent

Recall that under the Corporations Act *(Cth)* (2001), shareholders of Australian listed companies vote on the remuneration arrangements of key executive disclosed in the annual remuneration report. Consequently, the analysis is extended using the shareholder vote as an extra control in the formation and composition models. The variable, *Shareholder Dissent*, measured as the proportion of votes cast against the remuneration report, is introduced to determine if shareholder dissatisfaction of remuneration arrangements influences the formation and / or composition of the remuneration committee. Data for the 2008 shareholder vote is used in the analysis as a measure of shareholder dissatisfaction with company remuneration policy. Data limitations did not allow the use of the results of the shareholder non-binding vote in the prior period, however, the dissent vote in 2008 is indicative of cumulative dissatisfaction with remuneration arrangements.

Refer to Table 6-13, the committee formation model (amended Model 1) is statistically significant at $p < 0.01$ (Nagelkerke pseudo R- squared value for the model is 53 per cent). Although the full sample is used in the analysis, the sample reduces to 1206 companies due to missing data. The variables of interest that are significant in the main model remained significant in the amended committee formation model, that is agency variables related to shareholder characteristics, in particular ownership structure ($\beta = 0.22$, Wald = 11.85), institutional shareholding ($\beta = 0.02$, Wald = 13.35) are significant at $p < 0.01$ and CEO entrenchment ($\beta = 0.67$, Wald = 3.03) is marginally significant at $p < 0.10$. Board capacity, measured by board size, remained statistically insignificant. Control variables related to governance quality ($\beta = 0.75$, Wald = 150.67) and company size ($\beta = 0.34$, Wald = 26.63) are significant at $p < 0.01$ and big 4 auditor

(β = 0.36, Wald = 4.29) is significant at $p < 0.05$. The new control variable measuring shareholder dissent on the 2008 remuneration report (β = -0.65, Wald = 4.84) is significant at $p < 0.05$, however the coefficient is negative indicating that as shareholder dissent on the annual remuneration report increases companies are less likely to respond to the shareholder dissent by forming a remuneration committee.

The amended committee composition model (amended Model 2) is statistically significant at $p = < 0.01$ (Nagelkerke pseudo R square value for the model is 47 per cent). Although the sub-sample reflects all companies that have formed a remuneration committee, the sample reduces to 662 companies due to missing data. The variables of interest that were significant in the main model remained significant. Board independence (β = 5.25, Wald = 65.29) is significant at $p < 0.01$, indicating that the decision to adopt the ASX remuneration committee composition recommendations is still driven by the availability of independent directors. The agency cost variable geographical segments (β = 0.18, Wald = 3.96) is significant at $p < 0.05$. Control variables related to governance quality (β = 0.44, Wald = 15.90), company size (β = 0.27, Wald = 8.85) and company age (β = -0.03, Wald = 8.70) are significant at $p < 0.01$. The new control variable measuring shareholder dissent on the 2008 annual remuneration report is statistically insignificant in the composition model.

Therefore as companies are unlikely to respond to shareholder dissent on the annual remuneration report by subsequently forming a remuneration committee, for those companies that have formed a remuneration committee, shareholder dissent on the annual remuneration report is unlikely to result in adoption of all three membership guidelines included in the ASX remuneration committee recommendations.

Overall, the analysis indicates that the results presented in the main analysis at Section 6.3 are robust to controlling for the response by companies following shareholder dissent on the annual remuneration report.

TABLE 6-13: LOGISTIC REGRESSION – SHAREHOLDER DISSENT

	Amended Model 1 (Formation): N= 1206	**Amended Model 2 (Composition):** N = 662
Variable	Coefficient (Wald)	Coefficient (Wald)
Ownership Structure	0.22 (11.85)***	-0.01 (0.01)
Institutional Shareholding	0.02 (13.35)***	0.00 (0.00)
CEO Entrenchment	0.67 (3.03)*	0.33 (0.74)
Business Segments	0.03 (0.11)	-0.00 (0.00)
Geo. Segments	0.01 (0.04)	0.18 (3.96)**
Growth	0.02 (0.52)	0.05 (2.31)
Free Cash Flows	0.00 (0.01)	0.00 (0.04)
Asset Turnover	0.06 (0.22)	0.08 (0.31)
Board Size	0.06 (0.72)	0.12 (2.21)
Board Independence	N/A	5.25 (65.29)***
Company Size	0.34 (26.63)***	0.27 (8.85)***
Governance Quality	0.75 (150.67)***	0.44 (15.90)***
Leverage	-0.21 (0.10)	-0.73 (0.86)
Big 4 Auditor	0.36 (4.29)**	0.02 (0.01)
Company Age	0.01 (0.30)	-0.03 (8.70)***
Shareholder Dissent$_{t-1}$	**-0.65 (4.84)****	**-0.17 (0.13)**
Nagelkerke R Square	0.53***	0.47***

***,**,* denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.

Amended Model 1 (Formation): *Remuneration Committee* $= \beta_0 + \beta_1$*Ownership Structure* $+ \beta_2$*Institutional Shareholding* $+ \beta_3$*CEO Entrenchment* $+ \beta_4$*Business Segments* $+ \beta_5$*Geo. Segments* $+ \beta_6$*Growth* $+ \beta_7$*Free Cash Flow* $+ \beta_8$*Asset Turnover*$+ \beta_9$*Board Size* $+ \beta_{10}$*Company Size* $+ \beta_{11}$*Governance Quality* $+ \beta_{12}$*Leverage* $+ \beta_{13}$*Big4 Auditor* $+ \beta_{14}$*Company Age* $+ \beta_{15}$*Shareholder Dissent* $+ \beta_{16}$*Industry* $+ \varepsilon$

Amended Model 2(Composition) *ASX Adopter* $= \beta_0 + \beta_1$*Ownership Structure* $+ \beta_2$*Institutional Shareholding*$+ \beta_3$*CEO Entrenchment* $+ \beta_4$*Business Segments* $+ \beta_5$*Geo. Segments* β_6*Growth* $+ \beta_7$*Free Cash Flow* $+ \beta_8$*Asset Turnover* $+ \beta_9$*Board Size* $+ \beta_{10}$*Board Independence* $+ \beta_{11}$*Company Size* $+ \beta_{12}$*Governance Quality* $+ \beta_{13}$*Leverage* $+ \beta_{14}$*Big4 Auditor* $+ \beta_{15}$*Company Age* $+ \beta_{16}$*Shareholder Dissent* $+ \beta_{17}$*Industry* $+ \varepsilon$

Where:

Dependent Variables:

Amended Model 1 (Formation):

Remuneration Committee = Dichotomous variable, coded one (1) if the company has formed a remuneration committee as at 30 June 2008, and zero (0) otherwise.

Amended Model 2(Composition):

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition as at 30 June 2008, and zero (0) otherwise.

Independent and Control Variables:

Ownership Structure (shareholder dispersion and insider shareholding) = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

Business Segments = Number of business segments in which the company operates, as disclosed in the 2008 financial report.

Geo. Segments = Number of geographical segments in which the company operates, as disclosed in the 2008 financial report.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity as at 30 June 2008, winsorised at 1 per cent.

Free Cash Flow = Difference between the gross cash flow from operations less gross investment as at 30 June 2008, winsorised at 1 per cent.

Asset Turnover = Operating revenue divided by average total assets, as at 30 June 2008.

Board Size = Number of directors appointed to the Board as at 30 June 2008.

Board Independence = Number of independent directors divided by the number of directors as at 30 June 2008.

Company Size = Natural log of total assets, as at 30 June 2008.

Governance Quality = Score determined by adding one point for adoption of nominated ASX governance recommendations as disclosed in the 2008 financial report.

Leverage = Total assets divided by total liabilities as at 30 June 2008, winsorised at 1 per cent.

Big 4 Auditor = Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm as at 30 June 2008, and zero (0) otherwise.

Company Age = The number of years since the company listed on the ASX.

Shareholder Dissent = Total no votes cast / (no votes cast + yes votes cast) on the annual remuneration report.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

6.5 ROBUSTNESS TESTS

6.5.1 Endogeneity

The decision to adopt the ASX remuneration committee recommendations may not be exogenous. Adoption of the ASX Recommendations can influence board size and independence (Rainsbury et al., 2008). To determine the influence of endogeneity on the results a two stage regression is employed following the approach used by Rainsbury et al. (2008), Frankel, Kothari and Weber (2006) and Sun and Cahan (2009, 2012).

The variables included in the first stage ordinary least squares regression are those variables identified in extant research as being associated with the demand for an independent remuneration committee (Linck et al., 2008; Rainsbury et al., 2008; Sun and Cahan, 2009, 2012). These variables relate to shareholding characteristics, in particular, insider shareholding and institutional shareholding, CEO influence, growth opportunities, company complexity, company age and company size.

New variables *Ownership Rank* and *Board Rank* are included in the models as endogeneity is likely to affect the variation in *Ownership Structure*, in particular insider shareholding, and *Board Size* as opposed to the level of ownership structure and board size (Sun and Cahan, 2009, 2012). *Ownership Rank* and *Board Rank* are included in the first stage ordinary least squares regression model as extant research suggests that portfolio rank can be used as an instrumental variable (Frankel et al., 2006). Consequently, *Ownership Rank* and *Board Rank* are coded zero (0), one (1) or two (2) based on the portfolio rank of the variables *Ownership Structure* and *Board Size.* The variables Ownership Structure and Board Size are sorted in order of their size and the portfolio rank is determined by size.

The first stage ordinary least squares regression models are presented below.

First Stage Regression Model:

$$Ownership\ Structure = \beta_0 + \beta_1 Institutional\ Shareholding + B_2 Growth + \beta_3 Company\ Size + \beta_4 Ownership\ Rank + \varepsilon$$

$$Board\ Size = \beta_0 + \beta_1 Institutional\ Shareholding + \beta_2 CEO\ Entrenchment + \beta_3 Ownership\ Structure + \beta_4 Company\ Size + B_5 Growth + B_6 Complexity + B_7 Company\ Age + \beta_8 Board\ Rank + \varepsilon$$

Where:

Ownership Rank = portfolio rank based *Insider*, ranks are coded zero (0), one (1) or two (2).

Board Rank = portfolio rank based *Board Size*, ranks are coded zero (0), one (1) or two (2).

Ownership Structure = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.

Complexity = Number of business segments in which the company operates, as disclosed in the 2008 financial report & the number of geographical segments in which the company operates, as disclosed in the 2008 financial report.

Growth = Book value of equity divided by market value of equity as at 30 June 2008, winsorised at 1 per cent.

Company Size = Natural log of total assets, as at 30 June 2008.

Company Age = The number of years since the company listed on the ASX.

Models 1 and 2 outlined in the main analysis at section 6.3 are used in the second stage regression analyses, however the variable *Ownership Structure and Board Size* included in the second stage ordinary least squares regressions is the fitted value derived from the first stage ordinary least squares regressions. Table 6-14 presents the results of the second stage regression.

Overall the results are consistent with those reported in the main analysis. The committee formation (Model 1) remained statistically significant at $p < 0.01$ (Nagelkerke pseudo R Square for the model is 52 per cent). Shareholder characteristics related to ownership structure ($\beta = 0.19$, $t = 8.27$) and institutional shareholding ($\beta = 0.01$, $t = 9.05$) remaining significant at $p < 0.01$, and CEO entrenchment ($\beta = 0.64$, $t = 2.97$) remains significant at $p < 0.10$. Agency costs related to company complexity, growth and other company characteristics remain statistically insignificant. Board capacity represented by board size also remains statistically insignificant. The results of the control variables remain consistent with the results achieved in the main analysis. The results confirm the results reported in the main analysis, that is, companies respond to agency related shareholder characteristics as opposed to other agency costs or board capacity in the voluntary formation of a remuneration committee.

The composition model (Model 2) remained statistically significant at $p < 0.01$ (Nagelkerke pseudo R Square for the model is 56 per cent). Of the variables of primary interest, the availability of independent directors ($\beta = 3.83$, $t = 55.79$) remains the key predictor of adoption of the ASX remuneration committee recommendations and is significant at $p < 0.01$. The other measure of board capacity, board size ($\beta = 0.39$, $t = 10.62$) becomes statistically significant at $p < 0.01$. The results of the control variables remain consistent with the main analysis. The results of the composition model provide further support for the conclusion drawn in the main analysis reported at section 6.3. Board capacity is the key determinant of adoption of all three membership guidelines outlined in the ASX remuneration committee recommendations.

Overall the results are consistent the main analysis discussed at section 6.3. Agency costs are incrementally relevant to the formation decision, whereas board

capacity is incrementally relevant to full adoption of the ASX remuneration committee recommendations, after controlling for other company characteristics related to company size governance quality, auditor appointment and leverage.

TABLE 6-14: TWO STAGE REGRESSION RESULTS - FORMATION AND COMPOSITION

Second Stage Regression Results			**Model 1 (Formation):** N=1,304	**Model 2 (Composition):** N = 718
Variable	Hypotheses	Predicted Sign	Coefficient (t-statistic)	Coefficient (t-statistic)
Agency Characteristics:				
Ownership Structure	H1a, b	+	0.19 (8.27)***	0.12 (0.13)
Institutional Shareholding	1c	+	0.01 (9.05)***	0.01 (1.84)
CEO Entrenchment	H2	+	0.64 (2.97)*	0.38 (1.25)
Business Segments	H3	+	0.01 (0.02)	0.00 (0.00)
Geo. Segments	H3	+	0.01 (0.03)	0.08 (1.17)
Growth	H4a	+	0.02 (0.48)	0.04 (1.90)
Free Cash flows	H4b	+	0.00 (0.17)	0.00 (0.04)
Asset Turnover	H4c	-	-0.02 (0.12)	0.01 (0.04)
Board Capacity:				
Board Size	H5a	+	0.01 (0.03)	0.39 (10.62)***
Board Independence	H5b	+	N/A	3.83 (55.79)***
Controls:				
Company Size			0.34 (25.27)***	0.25 (8.88)***
Governance Quality			0.76 (168.53)***	0.82 (70.15)***
Leverage			-0.04 (0.00)	-0.14 (0.04)
Big 4 Auditor			0.36 (4.78)**	0.26 (1.80)
Company Age			0.00 (0.07)	-0.02 (6.25)***
Nagelkerke R Square			0.52***	0.56***

***,**,* denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.

Model 1 (Formation): *Remuneration Committee* $= \beta_0 + \beta_1$*Ownership Structure* $+ \beta_2$*Institutional Shareholding* $+ \beta_3$*CEO Entrenchment* $+ \beta_4$*Business Segments* $+ \beta_5$*Geo. Segments* $+ \beta_6$*Growth* $+ \beta_7$*Free Cash Flow* $+ \beta_8$*Asset Turnover*$+ \beta_9$*Board Size* $+ \beta_{10}$*Company Size* $+ \beta_{11}$*Governance Quality* $+ \beta_{12}$*Leverage* $+ \beta_{13}$*Big4 Auditor* $+ \beta_{14}$*Company Age* $+ \beta_{15}$*Industry* $+ \varepsilon$

Model 2(Composition) *ASX Adopter* $= \beta_0 + \beta_1$*Ownership Structure* $+ \beta_2$*Institutional Shareholding*$+ \beta_3$*CEO Entrenchment* $+ \beta_4$*Business Segments* $+ \beta_5$*Geo. Segments* β_6*Growth* $+ \beta_7$*Free Cash Flow* $+ \beta_8$*Asset Turnover* $+ \beta_9$*Board Size* $+ \beta_{10}$*Board Independence* $+ \beta_{11}$*Company Size* $+ \beta_{12}$*Governance Quality* $+ \beta_{13}$*Leverage* $+ \beta_{14}$*Big4 Auditor* $+ \beta_{15}$*Company Age* $+\beta_{16}$*Industry* $+\varepsilon$

Where:

Dependent Variables:

Model 1 (Formation):

Remuneration Committee = Dichotomous variable, coded one (1) if the company has formed a remuneration committee as at 30 June 2008, and zero (0) otherwise.

Model 2(Composition):

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition as at 30 June 2008, and zero (0) otherwise.

Independent and Control Variables:

Ownership Structure (shareholder dispersion and insider shareholding) = Fitted Value of the Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties as at 30 June 2008 derived from the first stage OLS model.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.

Business Segments = Number of business segments in which the company operates, as disclosed in the 2008 financial report.

Geo. Segments = Number of geographical segments in which the company operates, as disclosed in the 2008 financial report.

Growth = Book value of equity divided by market value of equity as at 30 June 2008, winsorised at 1 per cent.

Free Cash Flow = Difference between the gross cash flow from operations less gross investment as at 30 June 2008, winsorised at 1 per cent.

Asset Turnover = Operating revenue divided by average total assets, as at 30 June 2008.

Board Size = The fitted value of the Number of directors appointed to the Board as at 30 June 2008 derived from the first stage OLS model.

Board Independence = Number of independent directors divided by the number of directors as at 30 June 2008.

Company Size = Natural log of total assets, as at 30 June 2008.

Governance Quality = Score determined by adding one point for adoption of nominated ASX governance recommendations as disclosed in the 2008 financial report.

Leverage = Total assets divided by total liabilities as at 30 June 2008, winsorised at 1 per cent.

Big 4 Auditor = Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm as at 30 June 2008, and zero (0) otherwise.

Company Age = The number of years since the company listed on the ASX.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

6.6 SUMMARY

The results presented in this chapter provide detailed analysis regarding the first research question. Research question 1a is concerned with why companies form a remuneration committee. Research question 1b focuses on committee composition. In particular, what factors determine adoption of the ASX remuneration committee recommendations regarding its composition. The first five hypotheses specifically address research questions 1a and 1b, and are analysed in this chapter.

This chapter presented the results of logistic regression analyses examining the relationship between agency costs, board capacity and the voluntary adoption of ASX remuneration committee recommendations. The sample used in the analysis includes a diverse range of company sizes and ages. The results indicate that agency costs and board capacity are incrementally relevant to the decision to adopt the ASX remuneration committee recommendations, after controlling for company size, governance quality, leverage, company age and the presence of a big four auditor. Particularly, remuneration committee existence is significantly associated with insider share ownership, institutional shareholding and marginally related to a change in CEO. Composition of the committee is significantly explained by the availability of independent directors and marginally by complexity measured by geographical segments.

Agency costs associated with insider shareholding and institutional shareholding are significant determinants of remuneration committee existence in all bar the smallest companies. In small companies, addressing overall agency costs is marginally relevant to remuneration committee existence. Company size is a significant determinant of

remuneration committee existence in small to medium sized companies, and not for large companies.

As expected, adoption of all three membership guidelines outlined in the ASX remuneration committee recommendations is dependent on the availability of independent board members, regardless of company size. In small and medium sized companies, board size is also a significant factor to full adoption of the ASX remuneration committee recommendations.

Consistent with expectations the higher the governance quality of the company, the more likely the company adopts the ASX remuneration committee recommendations. This holds true regardless of company size. The results provide further empirical evidence that larger companies have greater capacity and resources to facilitate adoption of the ASX Recommendations, therefore the compliance burden is greater for smaller companies with less capacity to adopt the ASX Recommendations.

A summary of the key findings is included at Appendix 3. The following chapter presents the analysis related to remuneration committee efficacy.

7. ANALYSIS AND RESULTS - COMMITTEE EFFECTIVENESS

7.1 INTRODUCTION

The second part of this thesis examines the influence that adoption of the ASX remuneration committee recommendations has on executive remuneration practice. This chapter presents the analysis related to Hypotheses 6 and 7. Hypothesis 6 addresses the second research question which is concerned with whether adoption of the ASX remuneration committee recommendations influences the level of executive remuneration and the linkage to company performance in remuneration awarded to key executives. Therefore, Hypothesis 6 is concerned with the relation between adoption of the ASX remuneration committee recommendations and (a) executive remuneration levels and (b) the link to company performance. Hypothesis 6 is expressed as:

H6a: Adoption of the ASX remuneration committee recommendations is associated with the level of cash remuneration awarded to key executives.

H6b: Adoption of the ASX remuneration committee recommendations is associated with stronger pay for performance sensitivity in remuneration awarded to key executives.

Hypothesis 7 addresses the final research question which considers whether adoption of the ASX remuneration committee recommendations is negatively associated with shareholder dissent on the annual remuneration report. Hypothesis 7 is therefore concerned with the relation between the remuneration committee and the level of dissent on the non-binding shareholder vote on the company remuneration report at the annual general meeting. Hypothesis 7 is stated as:

H7: Companies adopting the ASX remuneration committee recommendations receive less shareholder dissent on the annual remuneration report.

This chapter is presented as follows. Section 7.2 presents the descriptive and univariate statistics for the variables used in the analyses. Section 7.3 presents the results from the multivariate analyses. The results of sensitivity analysis performed are reported in section 7.4, with the results of robustness testing presented in section 7.5. The chapter concludes at section 7.6.

7.2 DESCRIPTIVE STATISTICS AND UNIVARIATE ANALYSIS

7.2.1 Dependent Variables

The dependent variables presented in the analysis are (1) cash remuneration of the top five ranked executives (H6a), change in cash remuneration awarded to the top five ranked executives (H6b) and the level of shareholder dissent on the annual remuneration report (H7). Table 7-1 presents descriptive statistics for the total cash remuneration of the top five ranked executives. The natural log of cash remuneration and the change in the natural log of cash remuneration for the top five ranked executives are incorporated into the multivariate regression analyses as dependent variables. The natural log of total cash remuneration is used in the analysis of remuneration levels, and the change in the natural log of total cash remuneration is used to examine whether changes in executive remuneration are linked to company performance.

The data presented in Table 7-1 show that the average remuneration of the top five ranked executives for companies that have formed a remuneration committee is higher than those that have not formed a remuneration committee. Additionally, the mean remuneration for the top five ranked executives is higher for those companies that choose to adopt the ASX remuneration committee recommendations.

TABLE 7-1: DESCRIPTIVE STATISTICS - CASH REMUNERATION TOP FIVE EXECUTIVES

Panel A: Full Sample (N=1,497)					
Variable	**Mean $**	**Std Dev**	**Minimum $**	**Median $**	**Maximum $**
Cash Remuneration	578,858	1,238,787	0	259,387	24,054,907
Panel B: No Remuneration Committee Formed (N= 701)					
Variable	**Mean $**	**Std Dev**	**Minimum $**	**Median $**	**Maximum $**
Cash Remuneration	239,037	318,290	0	161,226	4,177,793
Panel C: Remuneration Committee Formed (N=796)					
Variable	**Mean $**	**Std Dev**	**Minimum $**	**Median $**	**Maximum $**
Cash Remuneration	878,123	1,614,633	0	453,530	24,054,907
Panel D: ASX Adopter Remuneration Committee (N=338)					
Variable	**Mean $**	**Std Dev**	**Minimum $**	**Median $**	**Maximum $**
Cash Remuneration	1,173,103	1,556,635	0	724,403	10,697,600

Table 7-2 reports the descriptive statistics for the total cash remuneration paid to the top five ranked executives by industry. The maximum total cash remuneration paid to the top five ranked executive ranges from $2,102,136 to $24,054,907 across all industry sectors. Companies included within the materials industry report the lowest average cash remuneration of $345,404. The consumer discretionary industry reports the highest average cash remuneration at $1,305,018. The information reported in Table 7-2 shows total cash remuneration paid to the top five ranked executives varies across industries.

TABLE 7-2: DESCRIPTIVE STATISTICS – CASH REMUNERATION BY INDUSTRY

Industry	N	Mean $	Std Dev	Minimum $	Median $	Maximum $
Information	96	565,886	518766	0	466,611	2,102,136
Utility	19	674,085	1095179	0	282,125	4,622,064
Telecom	27	631,170	1051751	0	310,650	5,285,226
Health Care	138	596,707	1023200	0	286,000	6,831,301
Materials	533	345,404	626560	0	204,841	7,039,339
Energy	179	421,574	906595	0	209,999	7,896,214
Industrial	159	899,705	1169145	0	562,599	9,050,944
Finance	182	602,962	1072719	0	191,999	9,283,747
Consumer Staples	42	677,738	1736134	0	263,628	10,697,600
Consumer Discretionary	122	1,305,018	2957584	0	615,778	24,054,907

For the analysis of shareholder dissent on the company remuneration report, the dependent variable is the level of shareholder dissent recorded in relation to the annual non-binding shareholder vote on the 2008 remuneration report. The dependent variable is calculated as the number of shareholder votes cast against the annual remuneration report divided by the sum of *no* and *yes* votes cast. Table 7-3 presents the descriptive statistics for shareholder dissent on the 2008 annual remuneration reports.

The results reported in Table 7-3 show that companies that have formed a remuneration committee receive a higher level of shareholder dissent on the annual remuneration report compared to companies that have not formed a remuneration committee. The mean level of shareholder dissent on the annual remuneration report for companies that had formed a remuneration committee is 7 per cent, whilst the mean level of shareholder dissent for companies that had not formed a remuneration

committee is 4 per cent. Additionally, companies that have formed a remuneration committee and have adopted the ASX remuneration committee composition recommendations receive the highest level of shareholder dissent on the annual remuneration report at 9 per cent.

TABLE 7-3: DESCRIPTIVE STATISTICS – SHAREHOLDER DISSENT ON THE ANNUAL REMUNERATION REPORT

Variable	Mean (%)	Std Dev	Minimum (%)	Median (%)	Maximum (%)
Level of Shareholder Dissent:					
No Remuneration Committee	3.68	8.19	0.00	0.67	63.00
Remuneration Committee	7.43	11.97	0.00	2.36	78.00
ASX Adopter Committee	9.31	12.34	0.00	4.04	77.00

Table 7-4 reports the descriptive statistics for shareholder dissent on the annual remuneration report broken down by industry. The average level of dissent across all industries ranged from 4 per cent to 7 per cent. The materials sector recorded the highest instance of shareholder dissent (78 per cent) on the 2008 remuneration report, followed by the energy sector (77 per cent) with the lowest shareholder dissent recorded by the utility sector (30 per cent). The average level of dissent was highest in the health care sector (7 per cent), followed by the information sector (7 per cent) with the lowest average level of shareholder dissent on the 2008 annual remuneration report being recorded in the consumer discretionary sector (4 per cent). Although some companies did record high levels of shareholder dissent, as evidenced by the maximum level of shareholder dissent reported in Table 7-4, the average level of shareholder dissent was quite low in the 2008 year.

TABLE 7-4: SHAREHOLDER DISSENT ON THE REMUNERATION REPORT BY INDUSTRY

Industry	N	Mean %	Std Dev	Minimum %	Median %	Maximum %
Information	90	6.73	10.76	0.00	18.50	59.00
Utility	19	5.90	9.00	0.00	17.70	30.00
Telecom	26	4.92	9.52	0.00	15.00	46.00
Health Care	134	7.41	10.95	0.00	22.80	50.00
Materials	522	4.97	10.52	0.00	0.81	78.00
Energy	173	5.04	10.22	0.00	13.90	77.00
Industrial	154	7.23	11.17	0.00	21.40	59.00
Finance	175	6.16	11.08	0.00	18.30	69.00
Consumer Staples	41	5.15	12.01	0.00	1.27	51.00
Consumer Discretionary	116	4.43	8.12	0.00	14.30	53.00

The analysis reported in Table 7-1 has identified that companies adopting the ASX remuneration committee recommendations on average pay higher executive remuneration compared to companies that do not adopt or that partially adopt the three membership guidelines included in the ASX remuneration committee recommendations. This result is expected as companies adopting the ASX remuneration committee recommendations are generally larger and more complex and therefore more likely to pay higher remuneration to their key executives. If shareholder dissent is related to remuneration levels, these companies are also more likely to attract higher levels of shareholder dissent on the annual remuneration report.

7.2.2 Independent and Control Variables

Some variables included in the analysis of remuneration levels, pay for performance sensitivity, and shareholder dissent are the same as the variables used in the formation and composition analysis discussed in Chapter 6. Therefore, the descriptive statistics for ownership structure (relating to insider shareholding), institutional shareholding, growth, board size, board independence, company size and CEO entrenchment are presented Table 6-2. Descriptive statistics regarding remuneration committee formation and composition are reported in Table 6-1.

Independent *t*-tests were performed to compare the continuous independent variables scores for companies that have fully adopted the ASX remuneration committee recommendations and those companies that have not. The results are reported in Table 7-5. Of the full sample of 1,497 companies, 338 fully adopted the ASX remuneration committee recommendations. The balance of 1,159 companies have either not formed a remuneration committee or have a committee that does not meet the ASX remuneration committee composition recommendations.

The results in Table 7-5 show that companies adopting the ASX remuneration committee recommendations pay higher remuneration to the top five ranked executives. These companies have a smaller change in remuneration compared to companies that do not adopt the ASX remuneration committee recommendations. Finally, companies that adopt the ASX remuneration committee recommendations receive on average higher levels of shareholder dissent regarding the annual remuneration report. The results are consistent with the descriptive statistics presented in Table 7-1 and Table 7-3.

Companies that adopt the ASX remuneration committee recommendations have higher mean ROA, have on average lower insider shareholdings, larger institutional shareholdings, and experience lower risk when compared to companies that do not voluntarily adopt the ASX remuneration committee recommendations.

Tests of differences between ASX adopter and non-adopter are reported in Table 7-5. The results show that the continuous variables, excluding change in operating performance, total shareholder return, change in remuneration, growth, and risk evidence significant difference in the mean scores between the two groups. The results suggest that remuneration and company and shareholder characteristics are systematically different for companies that adopt the ASX remuneration committee recommendations and those that do not.

As the sample exhibits non-normal distribution (see section 6.3.1 in Chapter 6), Mann-Whitney *U* tests were performed to test the differences between the two groups. The non parametric tests revealed a significant difference in all continuous variables except total shareholder return and change in cash remuneration. The Mann-Whitney *U* tests are consistent with the results of the parametric tests.

TABLE 7-5: DESCRIPTIVE STATISTICS - COMPARISON OF ASX ADOPTER REMUNERATION COMMITTEES AND NON ADOPTER REMUNERATION COMMITTEES

Variable[6]	**ASX Adopter Committee**				**Non Adopter Committee**				***t*-tests**	***U* tests**
	N	Mean	Std Deviation	Median	N	Mean	Std Deviation	Median	*t*	*U*
Shareholder Dissent	330	0.09	0.13	0.04	1120	0.05	0.09	0.01	-6.02 ***	120964 ***
ROA	338	-0.15	1.04	0.49	1156	-0.34	1.57	-0.10	-2.09 **	120232 ***
ΔROA	338	-0.09	0.97	-0.00	1155	-0.09	1.75	-0.02	-0.03	175016 ***
TSR	337	14.90	256.34	-0.32	1152	0.63	16.83	-0.35	-1.02	186346
Cash Remuneration	289	13.61	1.11	13.73	896	12.52	1.18	12.62	-13.71 ***	60834 ***
Cash Remuneration $_{t-1}$	291	12.31	3.79	13.40	903	10.23	4.74	12.20	-7.63 ***	69761 ***
ΔCash Remuneration	266	0.37	0.67	0.22	744	0.42	0.75	0.23	1.10	95784
Insider Shareholding	310	1.85	1.80	2.21	995	2.47	1.32	2.70	5.55 ***	126323 ***
Institutional Shareholding	338	29.11	24.34	26.76	1159	14.90	16.85	10.11	-10.05 ***	132497 ***
Company Size	338	18.79	2.18	18.73	1159	16.72	1.64	16.55	-16.16 ***	85896 ***
Board Size	338	5.59	1.58	5.00	1159	4.33	1.33	4.00	-13.40 ***	100889 ***
Board Independence	338	0.65	0.16	0.67	1159	0.40	0.27	0.40	-21.17 ***	86505 ***
Growth	338	2.55	2.99	1.60	1159	2.63	3.32	1.55	0.40	192017 ***
Risk	334	0.99	0.95	0.84	1149	1.28	15.50	0.60	0.34	170824 ***

***, **, * denotes significance at 1,5 and 10 per cent respectively

[6] See Tables 5-3, 5-4 and 5-5 for definitions of variables.

7.2.3 Bivariate correlations

Tables 7-6, 7-7 and 7-8 report the correlations between independent variables included in the models that analyse remuneration levels, pay for performance sensitivity and shareholder dissent on the annual remuneration report. Spearman rank order correlations are presented below the diagonal and Pearson product-moment correlations are presented above the diagonal. As the data exhibit non-normal characteristics the following discussion reports the Spearman rank order correlations.

Table 7-6 report correlations for the sample of companies included in remuneration levels analysis. The highest correlations are between company size and ROA at 0.66, board independence and the appointment of an independent chairperson at 0.54, and company size and board size at 0.54. These correlations are consistent with larger companies having larger boards and more independent directors which increase the company's capacity to appoint an independent chairperson.

In the remuneration levels analysis variables correlated above 0.40 are ROA*ASX adopter and ROA at 0.47, company size and ASX adopter at 0.41, company size and ROA at 0.66, company size and institutional shareholding at 0.44, company size and board size at 0.54, board independence and ASX adopter at 0.41, board independence and independent board chair at 0.54, independent board chair and separate board chair at 0.46.

Table 7-7 reports correlations for companies in the pay for performance sensitivity analysis. The highest correlations are between board independence and the presence of an independent chairperson at 0.54 and company size and prior year remuneration at 0.54. This is consistent with larger companies having higher remuneration. As noted

above, the availability of independent directors is related to whether an independent chairperson can be appointed to the board.

In the pay for performance sensitivity analysis variables correlated above 0.40 are company size and ASX adopter at 0.41, company size and prior year cash remuneration at 0.54, company size and institutional shareholding at 0.44, company size and board size at 0.54, board independence and ASX adopter at 0.41, board independence and independent board chair at 0.54 and independent board chair and separate board chair at 0.46.

Table 7-8 reports the correlations for the shareholder dissent model. The highest correlations are between company size and ROA at 0.66 and company size and current year cash remuneration at 0.62. Again, these correlations show that larger companies have higher remuneration.

In the shareholder dissent analysis variables correlated above 0.4 are ROA and cash remuneration at 0.48, company size and ASX adopter at 0.41, company size and cash remuneration at 0.62, company size and ROA at 0.66, company size and institutional shareholding at 0.44, company size and board size at 0.53 and board independence and ASX adopter at 0.41.

TABLE 7-6: CORRELATION MATRIX – REMUNERATION LEVELS ANALYSIS

Model 3	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	VIF
(1) ASX Adopter		0.05*	-0.12**	0.05	-0.18**	0.30**	0.44**	0.36**	0.39**	0.13**	0.28**	0.11**	-0.01	-0.01	1.53
(2) ROA	0.28**		0.33**	0.01	-0.02	0.06*	0.28**	0.11**	0.02	0.03	0.01	-0.10	-0.21**	0.00	1.78
(3) ROA*ASX Adopter	0.31**	0.47**		0.01	0.05	0.00	0.13**	0.06**	-0.08**	0.01	-0.02	-0.10**	0.05**	-0.00	1.57
(4) TSR	0.03	0.21**	0.09**		0.03	0.01	-0.01	0.01	0.02	0.01	-0.02	-0.01	0.00	-0.00	1.02
(5) Insider Shareholding	-0.13**	0.02	-0.01	-0.04		-0.33**	-0.32**	-0.20**	-0.21**	-0.08**	-0.15**	-0.09**	0.02	-0.03	1.33
(6) Institutional Shareholding	0.24**	0.26**	0.18**	0.06*	-0.27**		0.50**	0.34**	0.21**	0.04	0.13**	0.08**	0.01	0.02	1.47
(7) Company Size	0.41**	0.66**	0.36**	0.16**	-0.20**	0.44**		0.61**	0.23**	0.11**	0.14**	0.09**	-0.18**	0.02	2.85
(8) Board Size	0.36**	0.31**	0.23**	0.07*	-0.08**	0.27**	0.54**		0.20**	0.19**	0.16**	0.11**	-0.02**	0.04	1.75
(9) Board Independence	0.41**	0.17**	0.12**	0.01	-0.22**	0.21**	0.20**	0.19**		0.15**	0.55**	0.07**	0.00	0.02	1.72
(10) Separate Board Chair	0.13**	0.05*	0.05**	0.02	-0.06**	0.03	0.10**	0.22**	0.14**		0.46**	0.06**	-0.03	0.01	1.36
(11) Independent Board Chair	0.28**	0.04	0.08**	0.00	-0.15**	0.11**	0.13**	0.18**	0.54**	0.46**		0.02	-0.02	-0.02	1.88
(12) CEO Entrenchment	0.11**	0.03	0.01	-0.02	-0.06*	0.07**	0.08**	0.13**	0.07**	0.06**	0.02		0.00	-0.00	1.07
(13) Growth	0.01	-0.14**	-0.01**	0.39	-0.02**	0.02	-0.16	0.03	-0.01	0.01	-0.02	0.02		0.02	1.07
(14) Risk	0.08**	-0.02	-0.04	-0.13**	-0.17**	0.38**	0.17**	0.07**	0.05	-0.02	0.04	0.04	0.09		1.01

The correlation presented for dichotomous variables is the eta statistic. The Spearman's Correlation is reported below the diagonal and Pearson product-moment correlations above the diagonal. Industry correlations are not presented. **, * denotes significance at 1 and 5 per cent respectively.

TABLE 7-7: CORRELATION MATRIX – PAY FOR PERFORMANCE SENSITIVITY ANALYSIS

Model 4	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	VIF
(1) ASX Adopter		0.00	-0.01**	0.05	0.20**	-0.18**	0.30**	0.44**	0.36**	0.39**	0.13**	0.28**	0.11**	-0.01	-0.01	1.54
(2) ΔROA	0.08**		0.29**	0.00	-0.03	-0.03	0.02	0.11**	0.03	0.02	-0.02	-0.01	-0.02	-0.11**	0.00	1.59
(3) ΔROA*ASX Adopter	-0.08**	0.33**		0.00	-0.00	0.04	-0.01	0.07*	0.04	-0.05*	-0.00	-0.02	-0.09**	-0.04	-0.00	1.58
(4) TSR	0.03	0.14**	0.06*		0.01	0.03	0.01	-0.01	0.01	0.02	0.01	-0.02	-0.01	0.00	-0.00	1.02
(5) Cash Remuneration $_{t-1}$	0.35**	0.18**	0.06**	0.06		-0.01	0.23**	0.31**	0.23**	0.10**	0.03	0.09**	0.02	-0.00	0.02	1.70
(6) Insider Shareholding	-0.13**	-0.02	0.00	-0.04	-0.04		-0.33**	-0.32**	-0.20**	-0.21**	-0.08**	-0.15**	-0.09**	0.02	-0.03	1.37
(7) Institutional Shareholding	0.24**	0.15**	0.01	0.06*	0.38**	-0.27**		0.51**	0.34**	0.21**	0.04	0.13**	0.08**	0.01	0.02	1.52
(8) Company Size	0.41**	0.22**	0.03	0.16**	0.54**	-0.20**	0.44**		0.61*	0.23**	0.11**	0.14**	0.09**	-0.18**	0.02	2.90
(9) Board Size	0.36**	0.08**	0.03	0.07*	0.38**	-0.08**	0.27**	0.54**		0.20**	0.19**	0.16**	0.11**	-0.02**	0.04	1.77
(10) Board Independence	0.41**	0.06*	-0.02	0.01	0.20**	-0.22**	0.21**	0.20**	0.19**		0.15**	0.55**	0.08**	0.00	0.02	1.75
(11) Separate Board Chair	0.13**	-0.02	-0.02	0.02	0.04	-0.06*	0.03	0.10**	0.22**	0.14**		0.46**	0.06*	-0.03	0.01	1.41
(12) Independent Board Chair	0.28**	0.02	-0.06*	0.00	0.14*	-0.15**	0.11**	0.13**	0.18**	0.54**	0.46**		0.02	-0.02	0.03	1.92
(13) CEO Entrenchment	0.11**	0.01	-0.04	-0.02	0.03	-0.06*	0.07*	0.07**	0.13**	0.07**	0.06**	0.02		0.00	-0.00	1.07
(14) Growth	0.01	-0.00	0.01	0.39**	0.04	-0.02	0.02	-0.16**	0.03	-0.01	0.01	-0.02	0.02		0.02	1.07
(15) Risk	0.08**	0.10**	-0.06*	-0.13**	0.13**	-0.17**	0.38**	0.17**	0.07**	0.05	-0.02	0.04	0.04	0.09**		1.02

The correlation presented for dichotomous variables is the eta statistic. The Spearman's Correlation is reported below the diagonal and Pearson product-moment correlations above the diagonal. Industry correlations are not reported. **, * denotes significance at 1 and 5 per cent respectively.

TABLE 7-8: CORRELATION MATRIX - SHAREHOLDER DISSENT ANALYSIS

Model 5	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	VIF
(1) ASX Adopter		0.37**	0.05*	0.05	-0.18**	0.30**	0.44**	0.36**	0.39**	1.52
(2) Cash Remuneration	0.39**		0.16**	-0.02	-0.16**	0.37**	0.60**	0.47**	0.20**	1.75
(3) ROA	0.28**	0.48**		0.00	-0.02	0.06*	0.28**	0.11**	0.02	1.23
(4) TSR	0.03	0.09**	0.21**		0.03	0.01	-0.01	0.01	0.02	1.02
(5) Insider Shareholding	-0.13**	-0.08**	0.02	-0.04		-0.33**	-0.32**	-0.20**	-0.21**	1.36
(6) Institutional Shareholding	0.24**	0.38**	0.26**	0.06**	-0.27**		0.50**	0.34**	0.21**	1.48
(7) Company Size	0.41**	0.62**	0.66**	0.15**	-0.20**	0.44**		0.61**	0.23**	3.22
(8) Board Size	0.36**	0.44**	0.31**	0.07**	-0.08**	0.27**	0.53**		0.20**	1.72
(9) Board Independence	0.41**	0.22**	0.11**	0.01	-0.22**	0.21**	0.20**	0.19**		1.27

The correlation presented for dichotomous variables is the eta statistic. The Spearman's Correlation is reported below the diagonal and Pearson product-moment correlations above the diagonal. Industry correlations are not presented.

**,* denotes significance at 1 and 5 per cent respectively.

To examine whether the analyses are affected by multicollinearity, variance inflation factors (VIF) were determined for each variable. The VIF for each variable is reported at Table 7-6, Table 7-7 and Table 7-8. The VIF values are below two for each variable except company size. The VIF for company size is 2.85 in the remuneration levels model (Model 3), and 2.90 in the pay for performance analysis (Model 4), and 3.22 in the shareholder dissent model (Model 5). Overall, the VIF values are within the accepted guidelines of being less than 10, thereby indicating the efficacy of regression models are unlikely to be threatened by multicollinearity (Pallant, 2007; Hair et al., 2010).

7.3 MULTIVARIATE REGRESSION ANALYSIS

7.3.1 Remuneration Levels

This section examines the relation between remuneration committees adopting the ASX remuneration committee recommendations, remuneration levels and company performance. The first multivariate regression analysis addresses Hypotheses 6a and 6b, which states:

H6a: Adoption of the ASX remuneration committee recommendations is associated with the level of remuneration awarded to key executives.

H6b: Adoption of the ASX remuneration committee recommendations is associated with stronger pay for performance sensitivity in remuneration awarded to key executives.

Model 3, which is shown below, tests the relation between adoption of the ASX remuneration committee recommendations, company performance and the levels of executive remuneration.

Model 3 (Remuneration Levels):

$$Ln\ Cash\ Remuneration = \beta_0 + \beta_1 ASX\ Adopter + \beta_2 ROA + \beta_3\ ASX\ Adopter^{*}\ ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 Company\ Size + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Separate\ Board\ Chair + \beta_{11} Independent\ Board\ Chair + \beta_{12} CEO\ Entrenchment + \beta_{13} Growth + \beta_{14} Risk + \beta_{15} Industry + \varepsilon$$

Where:

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives.

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ROA = Return on Assets for 2008.

ASX Adopter*ROA = Interaction variable, ASX Adopter * ROA.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1 per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

A review of the regression normal probability plot, standardised residuals and scatter plot for Model 3 indicate the assumptions regarding normality, linearity and homoscedasticity are not violated. A White's Test suggests no heteroskedasticity of residuals. Table 7-9 below presents the results for regression analysis. Whilst the sample is drawn from the full sample only those companies that pay remuneration are included in the analysis. The final sub-sample has 1,067 companies.

Model 3 is statistically significant at $p < 0.01$ level. The adjusted R-squared is 43 per cent. The results indicate a positive and significant relationship between the adoption of the ASX remuneration committee recommendations ($\beta = 0.22$, $t = 2.71$) and cash remuneration at $p < 0.01$. That is, the presence of a remuneration committee with three or more members, the majority of which are independent and chaired by an independent director is associated with higher levels of remuneration for the top five ranked executives. As the results identify an association between adoption of the ASX remuneration committee recommendations and executive remuneration levels, Hypothesis 6a is supported.

Accounting based company performance measured by current year ROA ($\beta = -0.06$, $t = -1.39$, $p = 0.17$) is not statistically significant at conventional levels of $p < 0.10$, nor is the interaction variable, ROA * ASX Adopter ($\beta = 0.02$, $t = 0.27$, $p = 0.79$). Therefore the results do not indicate a statistically significant relation between company performance and the remuneration of the top five ranked executives. This relation is not influenced by adoption of the ASX remuneration committee recommendations regarding committee composition. Total shareholder return ($\beta = 0.00$, $t = -0.81$, $p = 0.42$) is also statistically insignificant, which is consistent with there being

no association between the remuneration level of the top five ranked executives and company performance, using either accounting or market measures.

A number of control variables are also found to be statistically significant. Insider shareholding (β= 0.08, t = 3.29) and institutional shareholding (β = 0.01, t = 3.08) are statistically significant at $p < 0.01$. Company financial characteristics of company size (β = 0.31, t = 12.55) is statistically significant at $p < 0.01$ and growth (β = 0.02, t = 2.12) is statistically significant at $p < 0.05$. Finally, of the governance control variables, board size (β = 0.10, t = 4.14) and separation of the role of CEO and board chairperson (β = -0.31, t = -3.35) are statistically significant at $p < 0.01$. The remaining control variables, board independence, the appointment of an independent chairperson, CEO entrenchment and company risk are not statistically significant.

Consistent with extant research (Conyon and He, 2004; Guest, 2010; Heaney et al., 2010; Geiler and Renneboog, 2011; Van Essen et al., 2012) the results of the controls suggest that as companies become larger and appoint larger boards, total cash remuneration is higher. Additionally, companies experiencing high growth, with higher insider shareholding and higher levels of institutional shareholding are also more likely to award higher remuneration.

Where the roles of the CEO and board chairperson are separated, the company is more likely to award lower levels of remuneration to the top five ranked executives. This suggests that board governance can have a moderating effect on executive remuneration. However, the other board governance variables used in the analysis are statistically non-significant. Therefore, in relation to board governance, it is the separation of the role of the CEO and board chairperson and not adoption of the ASX

remuneration committee recommendations that moderates the remuneration awarded to the top five ranked executives.

Whilst theory suggests that independent remuneration committees should moderate the level of remuneration awarded to executives, prior research finds no consistent evidence that independent remuneration committees are effective moderators of the level of remuneration awarded to the key executive. In his review of studies examining executive remuneration and remuneration committees, Conyon (2011) notes that on a cross sectional basis, prior research demonstrates that companies that form a remuneration committee pay higher remuneration to their executives and that the composition of the remuneration committee is not associated with the remuneration of the CEO. Longitudinal studies provide mixed evidence as to whether independent remuneration committees are effective moderators of executive remuneration. Recall that a significant proportion of prior literature is limited to large companies and the CEO, and generalisability and comparison with the results presented above is limited.

The results confirm the expectation that adoption of the ASX remuneration committee recommendations is associated with the level of remuneration awarded to key executives. In particular, the results indicate that adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration awarded to the top five ranked executives. However, higher levels of remuneration in itself does not provide conclusive evidence that these committees are associated with excessive levels of remuneration.

TABLE 7-9: ANALYSIS OF REMUNERATION LEVELS

Model 3 (Hypothesis 6a,b) N = 1,067	**Expected Sign**	**Coefficient**	**t-statistic**
ASX Adopter[7,8]	-/+	0.22	2.71***
ROA[9]	+	-0.06	-1.39
ROA *ASX Adopter	+	0.02	0.27
TSR	+	0.00	-0.81
Insider Shareholding	+	0.08	3.29***
Institutional Shareholding	-	0.01	3.08***
Company Size	+	0.31	12.55***
Board Size	+	0.10	4.14***
Board Independence	-	0.04	0.26
Separate Board Chair	-	-0.31	-3.35***
Independent Board Chair	-	0.10	1.28
CEO Entrenchment	-	-0.03	-0.20
Growth	+	0.02	2.12**
Risk	+	0.00	0.59
Constant		6.64	16.63***
R-squared		0.66	
Adjusted R-squared		0.43	
F statistic		34.29***	
***, **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented			
$Ln\ Cash\ Remuneration = \beta_0 + \beta_1 ASX\ Adopter + \beta_2 ROA + \beta_3\ ASX\ Adopter^* ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 Company\ Size + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Separate\ Board\ Chair + \beta_{11} Independent\ Board\ Chair + \beta_{12} CEO\ Entrenchment + \beta_{13} Growth + \beta_{14} Risk + \beta_{15} Industry + \varepsilon$			

[7] As a robustness test, Model 3 was re-performed with the presence of a remuneration committee replacing ASX Adopter. The variable was dichotomous and took the value of (1) if the company had formed a remuneration committee, and (0) otherwise. The amended model was robust to the inclusion of the presence of a remuneration committee.

[8] Some studies exclude finance companies on the basis they are subject to different regulation. Model 3 was re-run using the full sample excluding finance companies (GISC 40). The model was robust to the exclusion of finance companies.

[9] The model was re-performed substituting ROA with industry adjusted ROA and the interaction between industry adjusted ROA and ASX Adopter substituted for the interaction variable (ROA*ASX Adopter). The results of the amended model were substantively similar to the results presented in Table 7-9.

Where:

Dependent Variable:

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives.

Independent and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ROA = Return on Assets for 2008.

ASX Adopter*ROA = Interaction variable, ASX Adopter * ROA.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1 per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

The results also provide some evidence that adoption of the ASX remuneration committee recommendations is not associated with stronger linkage between cash remuneration and company performance. Therefore across a broad range of companies, the results do not provide evidence in support of Hypothesis 6b. Tosi et al. (2000) in

their meta analysis of empirical research find that performance accounts for less than five per cent of the variance of CEO remuneration. Australian evidence with regard to the link between CEO remuneration and performance is mixed. Whilst this study extends beyond the CEO, the results imply that the cash remuneration of the top five ranked executives is determined without regard to performance measured by ROA and TSR. This result provides evidence that is inconsistent with the underlying premise of the ASX remuneration committee recommendations.

Overall, the analyses suggest that in setting remuneration contracts for the top five ranked executives, independent remuneration committees are associated with higher, not lower remuneration. The results are consistent with Sapp (2008) who also finds that independent remuneration committees are associated with higher levels of remuneration. Sapp (2008) is one of the few studies examining the relation between the remuneration committee and remuneration of key executives, however the focus is large Canadian companies. Moreover, the existence of an independent remuneration committee did not influence the relation between remuneration of the top five ranked executives and company performance measured by ROA. Therefore, Hypothesis 6a is supported. However, contrary to predictions, no support is found for Hypothesis 6b.

Remuneration Levels - Performing vs. Non-Performing Companies

The analysis in the preceding section indicates that adoption of the ASX remuneration committee recommendations is associated with higher remuneration levels awarded to the top five ranked executives. Moreover, contrary to expectations, the relation between performance and remuneration was not significant. It was expected that better performing companies would have higher remuneration and that adoption of the ASX remuneration committee recommendations would moderate this relation

(Windsor and Cybinski, 2009). Extant research has shown that the moderating effect of an independent remuneration committee differs depending on whether the performance of the company is good or poor (Newman and Wright, 1995). To further test the relationship between the variables of interest, the sample is split based on whether the company had positive or negative operating performance. The results of this analysis is presented in Table 7-10. The descriptive statistics for both sub samples is presented at Appendix 5.

Model 3 is statistically significant in the analysis of companies with positive operating performance at $p < 0.01$ level. The adjusted R-squared is 45 per cent. The results indicate a positive and significant relationship between the adoption of the ASX remuneration committee recommendations ($\beta = 0.38$, $t = 2.88$) and executive remuneration levels at $p < 0.01$. That is, the presence of a remuneration committee with three or more members, the majority of which are independent and chaired by an independent director is associated with higher levels of remuneration for the top five ranked executives when company operating performance is positive. This result provides support for Hypothesis 6a in companies experiencing positive operating performance, measured by ROA.

Accounting based company performance as measured by ROA ($\beta = 1.35$, $t = 2.51$) is significant at $p < 0.05$ and the interaction variable, ROA * ASX Adopter, ($\beta = -1.61$, $t = -2.08$) is also significant at $p < 0.05$ in companies with positive operating performance. Total shareholder return ($\beta = 0.00$, $t = -1.12$, $p = 0.26$) is not significant. Therefore, the results indicate a statistically significant relation between company performance and the remuneration of the top five ranked executives when operating performance is positive. However, as the coefficient on the interaction variable is

negative, this means that remuneration committees adopting the ASX remuneration committee recommendations are not associated with stronger linkage between remuneration levels for the top five ranked executives and operating performance. Therefore Hypothesis 6b is not supported in companies with positive operating performance, measured by ROA.

In companies experiencing positive operating performance, insider shareholding ($\beta = 0.09$, $t = 2.85$), institutional shareholding ($\beta = 0.01$, $t = 3.53$), company size ($\beta = 0.26$, $t = 6.73$), board size ($\beta = 0.12$, t stat = 3.52) and growth ($\beta = 0.05$, $t = 2.61$) are statistically significant at $p < 0.01$, and the separation of the roles of board chair and CEO ($\beta = -0.34$, $t = -2.23$) is statistically significant at $p < 0.05$. The remaining control variables of board independence, CEO entrenchment and company risk remain non-significant. Therefore, in companies with positive operating performance, higher remuneration levels are associated with higher levels of insider and institutional shareholding, larger companies, companies with larger boards and experiencing higher growth. This association is moderated in companies that have separated the roles of CEO and board chairperson.

In companies with negative operating performance, measured by ROA, Model 3 is statistically significant at $p < 0.01$ level. The adjusted R-squared is 21 per cent. The results presented in table 7-10 indicate adoption of the ASX remuneration committee recommendations does not significantly influence remuneration levels in companies experiencing negative performance ($\beta = 0.14$, $t = 0.97$, $p = 0.33$). Therefore in these companies, no support for Hypothesis 6a or Hypothesis 6b is found.

Accounting based company performance ($\beta = -0.11$, $t = -2.31$) is significant at $p < 0.05$. As the sub-sample in this analysis is companies with negative operating

performance, the negative coefficient means that in these companies, increases in remuneration levels still occur when operating performance is negative. However, the increases are at a lower rate. The interaction variable, ROA * ASX Adopter ($\beta = 0.02$, $t = 0.28$, $p = 0.78$) is statistically not significant. Therefore, in companies with negative operating performance, adoption of the ASX remuneration committee recommendations is not associated with stronger linkage between remuneration levels and operating performance.

In companies experiencing negative operating performance, company size ($\beta = 0.32$, $t = 8.21$) remains significant at $p < 0.01$, and the explanatory power of board size ($\beta = 0.08$, $t = 2.03$) reduced to $p < 0.05$ in comparison to the positive ROA sub sample. The separation of the role of CEO and board chairperson remains negative ($\beta = -0.30$, $t = -2.49$) and its significance increases to $p < 0.01$. Company growth becomes non-significant. The remaining control variables of board independence, CEO entrenchment and company risk also remain insignificant.

Overall, the results of the control variables are largely consistent in performing and non performing companies. That is, company size and board size are positively associated with the level of remuneration awarded to the key executive team. The separation of the role of CEO and board chairperson moderates the level of remuneration awarded to the top five ranked executives. Differences arise in the relation between shareholder characteristics and company growth, and remuneration levels awarded to the top five ranked executives.

The results suggest that the association between adoption of the ASX remuneration committee recommendations and executive remuneration levels varies depending on whether the company is experiencing positive or negative operating

performance. The relation between company performance and executive remuneration levels also varies depending on whether the operating performance is positive or negative. One explanation could be that in performing companies, the remuneration committee chooses to support recommendations made by management regarding increments to the remuneration arrangements of the key executives. However, in non-performing companies, the results suggest companies adopting the ASX remuneration committee recommendations are not effective at moderating the level of remuneration awarded to executives.

TABLE 7-10: REGRESSION RESULTS REMUNERATION LEVELS, POSITIVE AND NEGATIVE PERFORMANCE

Model 3 (Hypothesis 6a,b)	**Positive ROA** (N = 444)		**Negative ROA** (N = 623)	
	Coefficient	t-statistic	Coefficient	t-statistic
ASX Adopter	0.38	2.88***	0.14	0.97
ROA	1.35	2.51**	-0.11	-2.31**
ROA *ASX Adopter	-1.61	-2.08**	0.02	0.28
TSR	0.00	-1.12	0.00	0.18
Insider Shareholding	0.09	2.85***	0.06	1.59
Institutional Shareholding	0.01	3.53***	0.00	0.70
Company Size	0.26	6.73***	0.32	8.21***
Board Size	0.12	3.52***	0.08	2.03**
Board Independence	0.30	1.30	-0.08	-0.41
Separate Board Chair	-0.34	-2.23**	-0.30	-2.49***
Independent Board Chair	0.04	0.39	0.18	1.60
CEO Entrenchment	-0.21	-1.24	0.11	0.56
Growth	0.05	2.61***	0.01	0.61
Risk	0.01	2.61	0.00	0.611
Constant	7.36	11.22***	6.75	10.58***
R-squared	0.67		0.45	
Adjusted R-squared	0.45		0.21	
F statistic	15.16***		6.85***	
***, **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.				

$$Ln\ Cash\ Remuneration = \beta_0 + \beta_1 ASX\ Adopter + \beta_2 ROA + \beta_3\ ASX\ Adopter^{*}\ ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 Company\ Size + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Separate\ Board\ Chair + \beta_{11} Independent\ Board\ Chair + \beta_{12} CEO\ Entrenchment + \beta_{13} Growth + \beta_{14} Risk + \beta_{15} Industry + \varepsilon$$

Where:

Dependent Variable:

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives.

Independent and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ROA = Return on Assets for 2008.

ASX Adopter*ROA = Interaction variable, ASX Adopter * ROA.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Remuneration Levels - Excessive Remuneration Companies

As the preceding analysis identified that adoption of the ASX remuneration committee recommendation is associated with higher levels of executive remuneration, further testing is conducted. The additional test examines whether remuneration committees adopting the ASX remuneration committee recommendations are associated with excessive levels of remuneration. The approach suggested by Core et al. (1999), Ferri and Maber (2009) and Conyon and Sadler (2010) to determine excessive executive remuneration is adopted for this analysis. This approach involves ranking the residuals from the main analysis and assuming companies in the top quartile of residual values pay excessive remuneration to the top five ranked executives. The rationale is that the higher the residual, the further the company is from the predicted remuneration level for that company which indicates the remuneration is excessive (Conyon and Sadler, 2010). Model 3 is then estimated for the companies identified using this method as having excessive remuneration.

Table 7.11 summarises the key data for the companies identified as paying excessive remuneration to their key executives, and presents comparative data for the full sample. Interestingly, the two samples have similar characteristics. Twenty three per cent of companies in the excessive remuneration sub sample adoption of the ASX remuneration committee recommendations. This adoption rate is consistent with the adoption rate for the full sample of 23 per cent. Statistics regarding change in CEO, dual CEO and Chair and the appointment of an independent chairperson are also consistent with the statistics for the full sample. The average level of insider shareholding, institutional shareholding, return on assets, company size, board size, and growth are also consistent.

TABLE 7-11: DESCRIPTIVE STATISTICS EXCESS PAY COMPANIES VERSUS FULL SAMPLE.

Panel A: Dichotomous Variables		
	Excessive Remuneration %	**Full Sample %**
ASX Adopter	22.5	22.6
Change in CEO	4.9	5.2
Dual CEO and Board Chair	12.7	15.5
Independent Board Chair	52.1	54.8

Panel B: Continuous Variables						
	Excessive Payers			**Full Sample**		
	Min	Mean	Max	Min	Mean	Max
ROA	-16.72%	-0.27%	0.66%	-37.20%	-0.29%	9.02%
TSR	-0.95%	-0.24%	2.14%	-1.00%	3.86%	4689%
Insider Shareholding	0.00%	19.91%	100.00%	0.00%	19.85	100.00%
Institutional Shareholding	0.00%	18.92%	79.00%	0.00%	18.11%	93.00
Company Size (Ln)	11.7580	17.39	24.34	11.76	17.19	24.36
Board Size	3	4.73	12	3	4.61	13.00
Board Independence	0.00%	46.00%	100.00%	0.00%	46.09%	100.00%
Growth	-3.03%	2.62%	18.76%	-3.03%	2.61%	18.76%
Risk	-51.70	7.96	0.81	-51.70	522.08	1.21

Table 7-12 presents the results of the regression analysis of the excessive remuneration sub-sample. The results produced an adjusted R-squared of 90 per cent. As the high r-squared can indicate over-fitting in the model, additional testing is performed. The original sample of companies identified as excess payers is used. However, the sample is expanded to include an equal number of companies that are identified as not paying excessive levels of remuneration. These companies produced residuals close to zero in the main analysis. The results of the analysis is presented at Table 7-12. Whilst the explanatory power decreases in the model with the matched sample, the overall results are substantively the same as the results achieved using

excessive pay companies only. Therefore, the discussion below focuses on the results of the excessive pay company analysis.

The model for *excessive remuneration* companies is statistically significant at $p < 0.01$. The presence of a remuneration committee adopting the ASX remuneration committee recommendations is positive and statistically significant ($\beta = 0.20$, $t = 4.54$) at $p < 0.01$. The results suggest that companies that adopt the ASX remuneration committee recommendations are associated with higher levels of remuneration awarded to executives in companies identified as paying excessive remuneration.

ROA is statistically significant ($\beta = -0.07$, $t = -6.90$) at $p < 0.01$ in companies identified as paying excessive executive remuneration. The results indicate that operating performance is negatively associated with remuneration levels. The interaction between the adoption of the ASX remuneration committee recommendations and accounting return ($\beta = 0.04$, $t = 1.59$) is positive and marginally significant at $p < 0.10$. Total shareholder return remained statistically insignificant ($\beta = 0.03$, $t = 0.04$, $p = 0.75$). This result infers that in companies paying excessive remuneration to the top five ranked executives, adoption of the ASX remuneration committee recommendations are associated with stronger linkage between remuneration and company performance. The influence of the remuneration committee in this regard is marginal at best. Overall the results do not provide strong evidence that adoption of the ASX remuneration committee recommendations is associated with stronger linkage between remuneration and company performance.

Company size ($\beta = 0.29$, $t = 18.61$), with other control variables of insider shareholding ($\beta = 0.08$, $t = 6.68$), institutional shareholding ($\beta = 0.01$, $t = 4.51$), board size ($\beta = 0.10$, $t = 4.70$), the separation of the roles of chair and CEO ($\beta = -0.32$,

t = -4.88) and company risk (β = 0.01, t = 5.30) are significant at $p < 0.01$. Growth (β = 0.02, t = 2.36) is also significant at $p < 0.05$. Overall, the results of the control variables are substantively similar to the results achieved in the main analysis at section 7.3.1

Therefore higher levels of *excessive* executive remuneration are associated with larger companies, companies with higher insider shareholdings, companies with higher institutional shareholding, companies with larger boards and companies evidencing greater risk. The effect of larger board size is somewhat moderated in companies where the roles of the CEO and chairperson are performed by different people. These results are consistent with the results of the main analysis.

Overall, the results provide some support for H6a and limited support for H6b. Companies that adopt the ASX remuneration committee recommendations are associated with higher levels of remuneration in companies identified as paying excessive remuneration to their executives. Therefore H6a is supported as there is a relation between adoption of the ASX remuneration committee recommendations and the level of executive remuneration awarded to the top five ranked executives. Marginal support was found for H6b, suggesting the companies that adopt the ASX remuneration committee recommendations are associated with stronger linkage between remuneration and company performance in companies that pay excessive levels of remuneration to their executives.

TABLE 7-12: EXCESSIVE REMUNERATION COMPANIES - REGRESSION ANALYSIS

Model 3 (Hypothesis 6a,b)	**Excessive Remuneration Sample** N = 267		**Matched Sample**[10] N=534	
	Coefficient	t-statistic	Coefficient	t-statistic
ASX Adopter	0.20	4.54***	0.15	2.40**
ROA	-0.07	-6.90***	-0.09	-5.43***
ROA *ASX Adopter	0.04	1.59*	0.09	3.95***
TSR	0.03	0.04	-0.00	-13.18***
Insider Shareholding	0.08	6.68***	0.03	1.93*
Institutional Shareholding	0.01	4.51***	0.01	3.30***
Company Size	0.29	18.61***	0.30	14.32***
Board Size	0.10	4.70***	0.09	3.97***
Board Independence	0.02	0.17	0.18	1.63*
Separate Board Chair	-0.32	-4.88***	-0.07	-1.14
Independent Board Chair	0.06	1.41	-0.03	-0.59
CEO Entrenchment	-0.08	-1.26	-0.11	-1.35
Growth	0.02	2.36**	0.03	2.93***
Risk	0.01	5.30***	0.00	2.37**
Constant	7.83	35.24***	7.28	22.85
R-squared	0.91		0.72	
Adjusted R-squared	0.90		0.70	
F statistic	107.22***		55.82***	

Whites Adjusted OLS. ***, **, * denotes significance at 1, 5 and 10 per cent respectively . Industry effects not presented.

Ln Cash Remuneration $= \beta_0 + \beta_1$*ASX Adopter* $+ \beta_2$*ROA* $+ \beta_3$ *ASX Adopter* ROA* $+ \beta_4$*TSR* $+ \beta_5$*Insider Shareholding* $+ \beta_6$*Institutional Shareholding* $+ \beta_7$*Company Size* $+ \beta_8$*Board Size* $+ \beta_9$*Board Independence* $+ \beta_{10}$*Separate Board Chair* $+ \beta_{11}$*Independent Board Chair* $+ \beta_{12}$*CEO Entrenchment* $+ \beta_{13}$*Growth* $+ \beta_{14}$*Risk* $+ \beta_{15}$*Industry* $+ \varepsilon$

[10] Model 3 was re-performed with the presence of a remuneration committee replacing ASX adopter. The variable was dichotomous and took the value of (1) if the company had formed a remuneration committee, and (0) otherwise. The results of the amended model are consistent with the results presented above.

Where:

Dependent Variable:

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives.

Independent and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ROA = Return on Assets for 2008.

ASX Adopter*ROA = Interaction variable, ASX Adopter * ROA.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1 per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Remuneration Levels - Summary

The analysis is this section provides support for H6a which states that adoption of the ASX remuneration committee recommendations is associated with the level of remuneration awarded to key executives. The initial analysis suggests that in setting remuneration contracts for the top five ranked executives, adoption of the ASX remuneration committee recommendations is associated with higher, not lower levels of remuneration. Moreover, these committees are not associated with a stronger relation between remuneration of the top five ranked executives and company performance.

When the sample is partitioned into companies with positive and negative performance, measured by ROA, the analysis provides limited support for H6a. In particular, the results suggest that the association between executive remuneration and adoption of the ASX remuneration committee recommendations varies depending on whether the company is experiencing positive or negative operating performance. Overall the results of the analysis indicate that adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration in companies with positive operating performance. However, in companies with negative operating performance adoption of the ASX remuneration committee recommendations is insignificant. Therefore support for Hypothesis 6a is found in relation to companies with positive return on assets, however no in relation is found in companies with negative return on assets.

In the analysis of companies with positive and negative operating performance, no support was found for H6b. In particular, in companies with positive operating performance adoption of the ASX remuneration committee recommendations is significant, however the coefficient is negative. Thereby, suggesting that adoption of

the ASX remuneration committee recommendation is not associated with stronger pay for performance sensitivity in executive remuneration levels. In companies with negative operating performance, adoption of the ASX remuneration committee recommendations is insignificant.

Finally, a sub-sample of companies deemed to pay excessive remuneration to their executives was analysed. The analysis suggests companies that adopt the ASX remuneration committee recommendations are associated with higher levels of remuneration in companies identified as paying excessive remuneration to their executives. The analysis also suggests that adoption of the ASX remuneration committee recommendations is associated with stronger links between remuneration and company performance in these companies. Consequently in the excessive remuneration sample, support is found for H6a, and marginal support is found for H6b.

Overall, only limited support at best is found regarding the proposition that adoption of the ASX remuneration committee recommendations ensures that executive remuneration is linked to company performance. Further testing regarding adoption of the ASX remuneration committee recommendations and the link between remuneration and company performance is analysed in the next section.

7.3.2 Pay for Performance Sensitivity in Executive Remuneration

Recall Hypothesis 6 expects that adoption of the ASX remuneration committee recommendations is associated with remuneration levels (H6a) and is associated with stronger pay for performance links in the remuneration awarded to the key executive team (H6b). The preceding analyses provide limited evidence at best that in certain circumstances adoption of the ASX remuneration committee recommendations is associated with stronger linkage between executive remuneration and performance.

This section examines the association between adoption of the ASX remuneration committee recommendations, *changes* in operating performance and *changes* in remuneration awarded to the top five ranked executives.

The analysis adopts the model frequently used in extant research to examine the pay for performance relation in executive remuneration. Ordinary least square regression is used to test the association between adoption of the ASX remuneration committee recommendations and the pay for performance sensitivity in executive remuneration for the top five ranked executives. The model employed to test the pay for performance sensitivity is expressed as Model 4 below. The dependent variable (Δ *Ln Cash Remuneration*) used in Model 4, is the change in the natural log of the total cash remuneration for the top five ranked executives. Model 4 specifically tests the elasticity of executive remuneration, that is, whether changes in remuneration are associated with changes in operating performance.

Model 4 (Pay for Performance Sensitivity)

$$\Delta Ln\ Cash\ Remuneration = \beta_0 + \beta_1 ASX\ Adopter + \beta_2 \Delta ROA + \beta_3 ASX\ Adopter * \Delta ROA + \beta_4 TSR + \beta_5 Ln\_Cash\_Remuneration_{t-1} + \beta_6 Insider\_Shareholding + \beta_7 Institutional\ Shareholding + \beta_8 Company\ Size + \beta_9 Board\ Size + \beta_{10} Board\ Independence + \beta_{11} Separate\ Board\ Chair + \beta_{12} Independent\ Board\ Chair + \beta_{13} CEO\ Entrenchment + \beta_{14} Growth + \beta_{15} Risk + \beta_{16} Industry + \varepsilon$$

Where:

Δ Ln Cash Remuneration = One year change in the natural log of cash remuneration for the top five ranked executives between 2007 and 2008.

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ΔROA = the change in return on assets.

ASX Adopter * ΔROA = Interaction variable, ASX Adopter * ΔROA.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Ln Cash Remuneration$_{t-1}$ = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives in the prior year.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1 per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Model 4 is statistically significant at $p < 0.01$. The adjusted R-squared is 36 per cent. Whilst drawn from the full sample, the sample used in the analysis includes only those companies that pay remuneration. The sub sample reduced to 951 due to missing data. The results of the analysis are included in Table 7-13.

ASX adopter ($\beta = 0.08$, $t = 1.52$, $p = 0.13$) is not significant in Model 4. The result suggests that remuneration committees with at least three members, majority of which are independent and with an independent chairperson, is not associated with changes to remuneration arrangements awarded to the top five ranked executives.

Change in operating performance measured as change in ROA ($\beta = -0.06$, $t = -2.19$) is significant at $p < 0.05$. As change in return on assets is either positive or negative, the

results suggest that contrary to expectation, where the change in accounting based return is negative, the change in remuneration is higher and when the change in accounting return is positive, the change in remuneration is lower. Total shareholder return (β = -0.00, t = -0.95, p = 0.34) is statistically insignificant. The interaction variable, ASX Adopter *Δ ROA (β = 0.05, t = 1.09, p = 0.28) whilst positive as predicted, is insignificant.

The results regarding company performance infer that changes in accounting return are associated with changes in the cash remuneration awarded to the top five ranked executives. However, shareholder return is not. Further, adoption of the ASX remuneration committee recommendations is not associated with the pay for performance sensitivity of changes in executive remuneration. Consequently, Hypothesis 6b is not supported.

Prior year remuneration (β = -0.42, t = -22.62) is significant at $p < 0.01$. The negative coefficient means the higher the previous year's remuneration the smaller the change in cash remuneration in the following year for the top five ranked executives.

Of the control variables, company size (β = 0.12, t = 7.62) and board size (β = 0.04, t = 2.72) are significant at $p < 0.01$. Company growth (β = 0.01, t = 2.00) is significant at $p < 0.05$. Board governance control variables of board independence, separate CEO and board chair, independent board chair are statistically insignificant, as is CEO entrenchment and company risk.

Agency theory suggests that strong governance should be associated with the alignment of the interests of shareholders and managers. Extant research also infers that strong corporate governance is effective at reducing managerial opportunism and results in stronger pay for performance sensitivity (Geiler and Renneboog, 2011). The results

of the analysis suggest that typical measures of board governance, for example higher levels of board independence, separation of the board chairperson and CEO, appointment of an independent chairperson, are not significant to the sensitivity in executive remuneration pay. This result is consistent with the findings of Tian and Twite (2010) who examined the effect of good governance on CEO remuneration in Australian companies between 2001 and 2005.

The finding that adoption of the ASX remuneration committee recommendations, that is forming a remuneration committee that has three members, is independent and has an independent chairperson, is not associated with stronger pay for performance sensitivity in changes in remuneration is consistent with Capezio et al. (2011). Although the Capezio et al. (2011) study only examines CEO remuneration in Australian companies, this study extends these findings to suggest that independent remuneration committees do not ensure alignment between remuneration and company performance for the top ranking executives. Therefore, the results suggest that the top five executives are remunerated regardless of company performance, measured by return on assets and total shareholder return.

The result regarding prior year remuneration is consistent with prior studies focused on US companies (Daily et al., 1998; Sun and Cahan, 2009). Further, studies on UK companies have identified that prior year remuneration is a significant determinant of future remuneration (Gregory-Smith, 2009). The analysis presented suggests that this is also the case with regard to Australian companies.

Recall that Hypothesis 6b predicts that adoption of the ASX remuneration committee recommendations strengthens the link to company performance. Limited support was found in the preceding section for Hypothesis 6b, in certain circumstances.

The discussion in this section suggests that the presence of a remuneration committee adopting the ASX remuneration committee recommendations is not associated with stronger pay for performance sensitivity in remuneration contracts related to the top five ranked executives. Consequently these findings do not provide support for Hypothesis 6b.

TABLE 7-13: REGRESSION RESULTS - PAY FOR PERFORMANCE ANALYSIS

Model 4 (Hypothesis 6b) N = 951	**Expected Sign**	**Coefficient**	***t*-statistic**
ASX Adopter[11]	+/-	0.08	1.52
ΔROA	+/-	-0.06	-2.19**
ASX Adopter* Δ ROA	+	0.05	1.09
TSR	+	0.00	-0.95
Ln Cash Remuneration$_{t-1}$	+	-0.42	-22.62***
Insider Shareholding	-	0.02	1.19
Institutional Shareholding	+	0.00	1.71*
Company Size	+	0.12	7.62***
Board Size	-	0.04	2.72***
Board Independence	-	0.04	0.45
Separate Board Chair	-	0.06	-0.93
Independent Board Chair	-	-0.00	-0.02
CEO Entrenchment	+	0.03	0.33
Growth	+	0.01	2.00**
Risk		0.00	-0.06
Constant		3.23	12.11***
R-squared		0.38	
Adjusted R-squared		0.36	
F statistic		23.24***	
***, **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.			
Δ *Ln Cash Remuneration* $= \beta_0 + \beta_1$*ASX Adopter* $+ \beta_2 \Delta$*ROA* $+ \beta_3$*ASX Adopter*ΔROA* $+ \beta_4$*TSR* $+ \beta_5$*Ln Cash Remuneration*$_{t-1}$ $+\beta_6$*InsiderShareholding* $+ \beta_7$*Institutional Shareholding* $+ \beta_8$*Company Size* $+ \beta_9$*Board Size* $+ \beta_{10}$*Board Independence* $+ \beta_{11}$*Separate Board Chair* $+ \beta_{12}$*Independent Board Chair* $+ \beta_{13}$*CEO Entrenchment* $+ \beta_{14}$*Growth* $+ \beta_{15}$*Risk* $+ \beta_{16}$*Industry* $+ \varepsilon$			

[11] Some studies exclude finance companies on the basis they are subject to different regulation. Model 4 was re-run using the full sample excluding finance companies (GISC = 40). The model was robust to the exclusion of finance companies.

Where:

Dependent Variable:

Δ Ln Cash Remuneration = One year change in the natural log of cash remuneration for the top five ranked executives between 2007 and 2008

Independent and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ΔROA = the change in return on assets.

ASX Adopter*ΔROA = Interaction variable, ASX Adopter * ΔROA

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Ln Cash Remuneration$_{t-1}$ = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives in the prior year.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

7.3.3 Shareholder Dissent

The following analysis section examines remuneration committee performance from the shareholders' perspective. Model 5 tests Hypothesis 7 which states that companies adopt the ASX remuneration committee recommendations receive lower levels of shareholder dissent on the annual remuneration report. The dependent variable is measured as the proportion of negative votes cast against the annual remuneration report (Carter and Zamora, 2009; Clarkson et al., 2011). A significant level of shareholder dissent on remuneration arrangements indicates a failure by the board and its remuneration committee to satisfy shareholders that remuneration contracts are appropriately aligned with the interests of shareholders. Consistent with extant research, the dependent variable is a non-transformed variable (Conyon and Sadler, 2010).

Model 5 (Shareholder Dissent)

$$\textit{Shareholder Dissent} = \beta_0 + \beta_1 \textit{ASX Adopter} + \beta_2 \textit{Ln Cash Remuneration} + \beta_3 \textit{ROA} + \beta_4 \textit{TSR} + \beta_5 \textit{Insider Shareholding} + \beta_6 \textit{Institutional Shareholding} + \beta_7 \textit{Company Size} + \beta_8 \textit{Board Size} + \beta_9 \textit{Board Independence} + \beta_{10} \textit{Industry} + \varepsilon$$

Where

Shareholder Dissent = The number of negative votes cast on the 2008 annual remuneration report / (number of votes cast for + number of votes cast against the 2008 annual remuneration report).

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives.

ROA = Earnings from continuing operations divided by total average assets.

TSR = Dividend adjusted annualised percentage change in stock price.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties and their related parties.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

Company Size = Natural log of total assets.

Board Size = Number of directors appointed to the board.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

The results of the analysis of Model 5 are included in Table 7-14. Model 5 is statistically significant at $p < 0.01$. The adjusted R-squared is 10 per cent. Whilst drawn from the full sample, the sample reduced to 1,039 companies due to missing data.

The results presented in Table 7-14 indicate that the presence of a remuneration committee adopting the ASX remuneration committee recommendations ($\beta = 0.01$, $t = 1.21$, $p = 0.23$) is not statistically significant. The expectation was that if shareholders perceive that adoption of the ASX remuneration committee recommendations to be associated with more effective remuneration practice, the coefficient would be negative and significant. This result suggests that the presence of a remuneration committee with at least three members, the majority of which is independent and has an independent chair person is not significantly associated with shareholder dissent regarding the annual remuneration report. This provides no support for H7, which predicted that adoption of the ASX remuneration committee recommendations would be associated with low levels of shareholder dissent on the annual remuneration report.

TABLE 7-14: SHAREHOLDER DISSENT AND ASX ADOPTERS

Model 5 (Hypothesis 7) (N = 1,039)	**Expected Sign**	**Coefficient**	***t*-statistic**
ASX Adopter[12]	-	0.01	1.21
Ln Cash Remuneration	+	0.00	1.08
ROA[13]	-	-0.01	-1.61*
TSR	-	-0.00	-0.65
Insider Shareholding	-	-0.00	-0.47
Institutional Shareholding	+/-	0.00	2.07**
Company Size	+/-	0.01	3.89***
Board Size	+/-	0.00	0.51
Board Independence	+/-	0.02	1.86*
Constant		-0.19	-4.16***
R-squared		0.12	
Adjusted R-squared		0.10	
F statistic		7.36***	
***, **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.			
Shareholder Dissent = β_0 + β_1*ASXAdopter* + β_2*Ln Cash Remuneration* + β_3*ROA* + β_4*TSR* + β_5*Insider Shareholding* + β_6*Institutional Shareholding* + β_7*Company Size* + β_8*Board Size* + β_9*Board Independence* + β_{10}*Industry* + ε			

Where

Dependent Variable:

Shareholder Dissent = The number of negative votes cast on the 2008 annual remuneration report / (number of votes cast for + number of votes cast against the 2008 annual remuneration report).

Independent and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendation regarding committee composition, and zero (0) otherwise.

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives.

ROA = Earnings from continuing operations divided by total average assets.

[12] The model was also run incorporating an interaction variable (ASX Adopter*Ln Cash Remuneration) to analyse the interaction between remuneration and adoption of the ASX remuneration committee recommendations. The interaction variable was statistically insignificant at conventional levels. The results of the amended model remained substantively similar to the results presented above.

[13] The model was re-performed substituting ROA with industry adjusted ROA. The results of the amended model were substantively similar to the results presented in Table 7-14.

TSR = Dividend adjusted annualised percentage change in stock price.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties and their related parties.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

Company Size = Natural log of total assets.

Board Size = Number of directors appointed to the board.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Although the coefficient is positive, remuneration of the top five ranked executives ($\beta = 0.00$, $t = 1.08$, $p = 0.28$) is not significant. This result is contrary to expectations. The shareholder vote on the annual remuneration report is intended to reflect shareholder satisfaction regarding the remuneration practices of the company. This result suggests that factors other than the cash remuneration of the top five ranked executives of the company are associated with shareholder dissent on the annual remuneration report.

Company performance measured by return on assets ($\beta = -0.01$, $t = -1.61$, $p = 0.11$) is marginally significant at best, whilst total shareholder return ($\beta = -0.00$, $t = -0.65$, $p = 0.52$) is not statistically significant. Therefore, the result regarding return on assets provides weak evidence higher operating performance is associated with lower the levels of shareholder dissent on the annual remuneration report.

Of the control variables, company size ($\beta = 0.01$, $t = 3.89$) is significant at $p < 0.01$, institutional shareholding ($\beta = 0.00$, $t = 2.07$) is significant at $p < 0.05$ and board independence ($\beta = 0.02$, $t = 1.86$) is marginally significant at $p < 0.10$. The controls

infer that shareholder dissent is higher in larger companies, companies with higher institutional ownership, and greater board independence.

The results regarding remuneration are inconsistent with research conducted in the UK (Carter and Zamora, 2009; Conyon and Sadler, 2010), which found that CEO remuneration was statistically significant. Extant research suggests that as remuneration increases the likelihood of the company receiving a higher level of shareholder dissent on the remuneration report also increases. However, it should be noted that extant research has examined the remuneration of the CEO only. This thesis considers the remuneration of the top five ranked executives which includes the CEO but is not limited to the CEO. One explanation is that shareholders could take a different view when focused solely on the remuneration awarded to the CEO, versus the remuneration arrangements of the top five ranked executives.

The results regarding company size and board independence are consistent with extant research (Carter and Zamora, 2009; Conyon and Sadler, 2010). However, contrary to the results presented, Conyon and Sadler find that in UK companies shareholder dissent is less where the company has higher institutional ownership. The difference in institutional shareholder behaviour in Australian companies and UK companies could reflect differences in the institutional setting between the UK and Australia. Consistent with extant research, the higher the company performance as measured by accounting return the less shareholder dissent on the annual remuneration report (Carter and Zamora, 2009; Conyon and Sadler, 2010).

Recall hypotheses 6a and 6b expects that adoption of the ASX remuneration committee recommendations is associated with executive remuneration levels and strengthens the link to company performance. Therefore, Hypothesis 7 expects that

these companies are associated with lower levels of shareholder dissent on the annual remuneration report. The results outlined above find that the adoption of the ASX remuneration committee recommendations is not associated with the level of shareholder dissent regarding the remuneration report. That is, an adoption of the ASX remuneration committee recommendations does not significantly influence shareholder voting behaviour on the annual remuneration report. Consequently Hypothesis 7 is not supported.

Excessive Remuneration Companies and Shareholder Dissent

Consistent with the analysis regarding executive remuneration practice, the shareholder dissent analysis is extended to analyse those companies identified as paying excessive remuneration to the top five ranked executives. The analysis of executive remuneration levels identified that companies adopting the ASX remuneration committee requirements are associated with excessive remuneration levels for the top five ranked executives. In this section the analysis is extended to determine whether these companies are also associated with higher levels of shareholder dissent on the annual remuneration report. The results of the analysis are included in Table 7-15.

The model is statistically significant at $p < 0.01$. The adjusted R-squared is 21 per cent. The sample used is the same sample used in the analysis of excessive remuneration levels, although the sample reduced to 257 companies due to missing data.

Adoption of the ASX remuneration committee recommendations (ASX Adopter $\beta = -0.04$, $t = -2.12$) is statistically significant at $p < 0.05$. The negative coefficient suggests that in companies identified as paying excessive remuneration to the top five ranked executives, companies that adopt the ASX remunerating committee

recommendations are associated with lower levels of shareholder dissent. This provides some support for Hypothesis 7. The preceding section identified that adoption of the ASX remuneration committee recommendations is not associated with the level of shareholder dissent on the annual remuneration report. Therefore the support for Hypothesis 7 identified in this analysis is limited to those companies identified as paying excessive remuneration to their key executives.

The level of remuneration ($\beta = 0.03$, $t = 1.44$, $p = 0.15$) in these companies is not significant. Company performance measured by accounting return ($\beta = -0.00$, $t = -0.10$, $p = 0.92$), and total shareholder return ($\beta = -0.01$, $t = -0.64$, $p = 0.52$) are also not significant. The lack of statistical significance infers that shareholder dissent on the annual remuneration report is not related to the level of cash remuneration awarded to the top five ranked executives nor is it related to company performance in companies identified as paying excessive levels of remuneration.

Board independence ($\beta = 0.07$, $t = 2.92$) is significant at $p < 0.01$ and insider shareholding ($\beta = -0.01$, $t = -2.16$) is significant at $p < 0.05$. The remaining control variables, institutional shareholding, company size and board size are not significant. Overall the results of the control variables suggest that company with higher insider shareholding are associated with lower shareholder dissent and greater board independence is associated with higher levels of shareholder dissent in companies paying excessive remuneration to the top five ranked executives.

TABLE 7-15: SHAREHOLDER DISSENT – EXCESSIVE REMUNERATION COMPANIES

Model 5 (Hypothesis 7) (N = 257)	**Coefficient**	***t*-statistic**
ASX Adopter[14]	-0.04	-2.14**
Ln Cash Remuneration	0.03	1.44
ROA	-0.00	-0.10
TSR	-0.01	-0.64
Insider Shareholding	-0.01	-2.16**
Institutional Shareholding	0.00	1.20
Company Size	0.01	1.52
Board Size	0.00	0.19
Board Independence	0.07	2.92***
Constant	-0.46	-2.93***
R-squared	0.26	
Adjusted R-squared	0.21	
F statistic	4.75***	
Whites Adjusted OL S results presented. *** , **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.		
$Shareholder\ Dissent = \beta_0 + \beta_1 ASX\ Adopter + \beta_2 Ln\ Cash\ Remuneration + \beta_3 ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 Company\ Size + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Industry + \varepsilon$		

Where

Dependent Variable:

Shareholder Dissent = The number of negative votes cast on the 2008 annual remuneration report / (number of votes cast for + number of votes cast against the 2008 annual remuneration report).

Independent and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendation regarding committee composition, and zero (0) otherwise

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives.

ROA = Earnings from continuing operations divided by total average assets.

TSR = Dividend adjusted annualised percentage change in stock price

[14] The model was also run incorporating an interaction variable (ASX Adopter*Ln Cash Remuneration) to analyse the interaction between remuneration and adoption of the ASX remuneration committee recommendations. The interaction variable was statistically insignificant at conventional levels.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties and their related parties.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

Company Size = Natural log of total assets.

Board Size = Number of directors appointed to the board.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Shareholder Dissent - Summary

The results of the shareholder dissent analysis provides evidence that adoption of the ASX remuneration committee recommendations is not associated with shareholder dissent regarding the annual remuneration report, unless the company pays excessive remuneration. In companies identified as paying excessive remuneration to the top five ranked executives, the presence of a remuneration committee adopting all three guidelines outlined in the ASX remuneration committee recommendations is associated with lower levels of shareholder dissent on the annual remuneration report. Overall, the findings provide only limited support for Hypothesis 7.

7.4 ADDITIONAL ANALYSIS

7.4.1 Company Size Analysis

As company size is considered a significant factor relevant to executive remuneration, the analysis is re-performed based on company size (Tosi et al., 2000). Windsor and Cybinski (2009) found that the efficacy of the remuneration committee is affected by company size. Although Windsor and Cybinski (2009) partitioned their sample into three groups based on size, the sample used was large companies. The sample used in this thesis is a larger and more comprehensive sample of all company

sizes. The analysis examines three groups of companies reflecting large, mid-size and small companies. The large company analysis examines companies included in the sample which are also included in the ASX 300 Index. The small company analysis examines the smallest five hundred companies included in the sample based on asset size. The remaining companies are included in the mid-size company analysis. Remuneration levels, pay for performance sensitivity and shareholder dissent models are analysed for each company size. The results of the analyses are presented in Table 7-16.

Remuneration Levels & Pay for Performance Sensitivity

This section examines the relation between adoption of the ASX remuneration committee recommendations and company size. Remuneration levels (Model 3) and pay for performance sensitivity of remuneration (Model 4) awarded to the executives is examined for each group of companies. Larger companies are associated with paying higher salaries, having more complex operations and therefore more complex remuneration practices. The companies included in the large company analysis are the 154 companies included in full sample who are also members of the ASX 300 Index. This sub-sample reduces to 135 companies due to missing data.

The model examining remuneration levels (Model 3) is statistically significant at $p < 0.01$. The adjusted R-squared is 49 per cent. The key variables of interest are adoption of the ASX remuneration committee recommendations and the interaction between adoption of the ASX remuneration committee recommendations and operating performance measured by return on assets. ASX adopter ($\beta = -0.06$, $t = -0.37$, $p = 0.71$) is statistically insignificant. This suggests that adoption of the ASX remuneration

committee recommendations is not associated with executive remuneration levels in large companies.

Return on assets (β = 1.92, t = 2.52) is significant at $p < 0.01$. The interaction variable (β = -2.46, t = -2.66) is significant at $p < 0.01$, however the negative coefficient means that the remuneration committee is not associated with stronger linkage between cash remuneration and operating performance. Total shareholder return (β = -0.30, t = -2.45) is significant at $p < 0.05$, suggesting that in large companies increases in shareholder wealth are associated with lower remuneration awarded to the executives. Consequently, in large companies, whilst increases in operating return as associated with higher remuneration, the opposite occurs when shareholder wealth increases.

Company size (β = 0.34, t = 5.63) is statistically significant at $p < 0.01$ and the appointment of an independent board chair (β = 0.35, t = 1.80) and company growth (β = 0.04, t = 1.77) are marginally significant at $p < 0.10$. The results of the control variables indicate that higher remuneration is associated with larger companies, company growth and companies that have appointed an independent board chairperson. The other control variables, board size, board independence, separation of the roles of CEO and board chairperson, CEO entrenchment and company risk are insignificant to remuneration awarded to the executives in large companies.

The mid-size company analysis (N = 620) includes all companies included in the full sample that are not included in the large or small company sub-samples. The model analysing remuneration levels (Model 3) is statistically significant at $p < 0.01$. The adjusted R-squared is 22 per cent. Adoption of the ASX remuneration committee recommendations (β = 0.27, t = 2.62) is significant at $p < 0.01$. The positive coefficient

means that companies adopting the ASX remuneration committee recommendations are associated with higher levels of remuneration in mid-size companies.

Accounting return, ROA, (β = -0.08, t = -1.29, p = 0.20) and total shareholder return (β = 0.00, t = -1.07, p = 0.29) are not significant. The interaction variable (β = 0.03, t = 0.16, p =0.87) is also not significant. This indicates that in mid-sized companies, operating performance and shareholder return are not associated with executive remuneration levels. Further, the adoption of the ASX remuneration committee recommendations is not associated with stronger linkage between remuneration and company performance in these companies.

Shareholder characteristics related to insider shareholdings (β = 0.09, t = 2.97) and institutional shareholdings (β = 0.01, t = 3.48) are statistically significant at $p < 0.01$. Company size (β = 0.24, t = 5.69) and board size (β = 0.10, t = 2.99) are also significant at $p < 0.01$, whilst company growth (β = 0.03, t = 1.66) is marginally significant at $p < 0.10$. The remaining control variables are not significant. Consequently higher remuneration is associated with higher insider shareholding, higher institutional shareholding, larger companies, companies with larger boards and companies experiencing higher growth. CEO entrenchment is not associated with remuneration levels. Board governance related to board independence, the appointment of an independent board chair, and the separation of the roles of CEO and board chair are also not significant.

The small company sub-sample (N = 312) includes the five hundred smallest companies by asset size. The sub-sample reduced to include only those companies that pay remuneration. Missing data also reduces the sub-sample. The model examining remuneration levels (Model 3) is statistically significant at $p = 0.01$. The adjusted R-

squared is 6 per cent. The presence of a remuneration committee adopting the ASX remuneration committee recommendations ($\beta = 0.29$, $t = 1.12$, $p = 0.27$) is statistically insignificant. This result indicates that these committees are not associated with the level of remuneration awarded to executives in small companies.

Accounting return, ROA, ($\beta = -0.09$, $t = -0.96$, $p = 0.34$) and total shareholder return ($\beta = -0.03$, $t = -0.32$, $p = 0.75$) are statistically insignificant, as is the interaction between accounting return and ASX adopter ($\beta = 0.03$, $t = 0.26$, $p = 0.80$). Therefore company performance is not associated with the level of remuneration awarded to the top five ranked executives. Adoption of the ASX remuneration committee recommendations does not influence the link between remuneration and operating performance in these companies.

Company size ($\beta = 0.40$, $t = 3.76$) and the separation of the roles of CEO and board chair ($\beta = -0.47$, $t = -2.75$) are significant at $p < 0.01$, whilst the appointment of an independent board chair ($\beta = 0.30$, $t = 1.81$) is significant at $p < 0.10$. Shareholder characteristics related to insider shareholding and institutional shareholding are statistically insignificant. Board size, board independence, CEO entrenchment, company growth and risk are also not significant. Therefore companies at the larger end of the small company group and companies with an independent board chairperson pay higher salaries to their key executives. This effect is moderated if the roles of CEO and board chairperson are separated.

The model analysing pay for performance sensitivity of remuneration in large companies (Model 4) is statistically significant at $p < 0.01$ ($N = 127$). The sample is reduced due to missing data points. The adjusted R-squared is 30 per cent. Adoption of the ASX remuneration committee recommendations ($\beta = -0.08$, $t = -0.79$, $p = 0.43$) is not

associated with the pay for performance sensitivity of executive remuneration in large companies.

Change in return on assets (β = 1.22, t = 3.57) is significant at $p < 0.01$. The interaction between ASX adopter and return on assets (β = -2.41, t = -3.40) is also significant at $p < 0.01$. Total shareholder return (β = -0.20, t = -2.53) is significant at $p = 0.01$. The results suggest that changes to remuneration are associated with operating performance and shareholder wealth. Whilst operating performance is likely to increase remuneration, an increase in shareholder wealth results in a smaller change to remuneration. The negative coefficient on the interaction variable means that adoption of the ASX remuneration committee recommendations is likely to weaken the pay for performance sensitivity in the remuneration awarded to the executives.

Prior year cash remuneration (β = -0.28, t = -5.75) is significant at $p < 0.01$, indicating that prior year remuneration is a significant determinant of future remuneration. Of the control variables board size (β = 0.08, t = 2.82) is significant at $p < 0.01$, board independence (β = 0.68, t = 2.52) is significant at p = 0.01 and company growth (β = 0.03, t = 1.93) at $p < 0.10$. The positive coefficients mean that higher remuneration is associated with companies with larger and more independent boards and companies with higher growth. The other control variables, company size, insider shareholder, institutional shareholding, separation of the roles of CEO and board chair, the appointment of an independent board chair, CEO entrenchment and company risk are not significant.

The results suggest that in large companies, remuneration committees adopting the ASX remuneration committee recommendations are not associated with cash remuneration or stronger linkage between remuneration and company performance.

This result is inconsistent with the results of the main analysis using the full sample which found that adoption of the ASX remuneration committee recommendations was associated with higher remuneration levels. Therefore in relation to large companies, Hypothesis 6a is not supported. However, the results are consistent with the main analysis regarding pay for performance sensitivity. The large company results are consistent with the findings of Lawrence and Stapledon (1999) study, however inconsistent with the Capezio et al. (2011) study. These two studies examined large Australian companies.

Of particular interest is that adoption of the ASX remuneration committee recommendations is associated with weaker pay for performance sensitivity of remuneration awarded to executives in large companies. The result is contrary to theoretical expectations and the prediction in Hypothesis 6b.

The pay for performance sensitivity model (Model 4) is statistically significant at $p < 0.01$ for mid-size companies (N = 554). The sample is reduced due to missing data points. The adjusted R-squared is 21 per cent. ASX Adopter ($\beta = 0.10$, $t = 1.79$) is marginally significant at $p < 0.10$, suggesting that adoption of the ASX remuneration committee recommendations is associated with larger changes in executive remuneration.

Change in accounting return, ROA, ($\beta = -0.04$, $t = -1.69$) is marginally significant at $p < 0.10$, whilst total shareholder return ($\beta = -0.00$, $t = -4.80$) is significant at $p < 0.01$. The interaction between change in operating performance and ASX complaint ($\beta = -0.34$, $t = -2.30$) is significant at $p < 0.05$. The results suggest that change in operating performance and shareholder wealth affect changes in remuneration awarded to the executives. However, adoption of the ASX remuneration committee

recommendations is likely to weaken the pay for performance sensitivity in changes in executive remuneration.

Prior year cash remuneration (β = -0.37, t = -8.03) and company size (β = 0.11, t = 4.00) are significant at $p < 0.01$. Institutional shareholding (β = 0.00, t = 2.47) and board size (β = 0.04, t = 2.19) are significant at $p < 0.05$. Other controls related to insider shareholding, board independence, separate board chair, independent board chair, growth and risk are not significant. Consequently prior year remuneration is a significant determinant of changes in remuneration in the next year, as is company size. Board size is also positively related to change in remuneration.

Overall the results infer that in mid-sized companies' adoption of the ASX remuneration committee recommendations is associated with executive remuneration levels, providing support for Hypothesis 6a. In particular, adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration. Adoption of the ASX remuneration committee recommendations is also marginally associated with changes to executive remuneration of the top five ranked executives. However, adoption of the ASX remuneration recommendations is associated with weaker, not stronger, pay for performance sensitivity in the remuneration awarded to key executives. Therefore, in mid-sized companies, Hypothesis 6b is not supported.

The pay for performance sensitivity model (Model 4) is statistically significant at $p < 0.01$ for small companies (N = 226). The sample is reduced due to missing data points. The adjusted R-squared is 43 per cent. ASX adopter (β = 0.17, t = 1.29, p = 0.20) is statistically insignificant. Therefore in small companies adoption of the

ASX remuneration committee recommendations is not associated with changes in remuneration awarded to the top five ranked executives.

Change in accounting return (ROA) (β = -0.08, t = -2.05) is significant at $p < 0.05$. The interaction between change in accounting return (ROA) and ASX adopter (β = 0.10, t = 2.36) is marginally significant at $p < 0.10$. Total shareholder return is statistically insignificant (β = 0.04, t = 0.60, p = 0.55). Therefore changes in operating performance as opposed to shareholder wealth are associated with changes in executive remuneration. Additionally, adoption of the ASX remuneration committee recommendations strengthens the link between operating performance and remuneration in small companies.

Prior year cash remuneration (β = -0.51, t = -10.45) and company size (β = 0.18, t = 2.69) are significant at $p < 0.01$. The remaining control variables are not significant. Therefore, prior year remuneration and company size are a key determinant of change in executive remuneration in small companies.

Extant research regarding the influence of performance on executive remuneration tends to focus on CEO remuneration and samples of large companies. Research to date has yielded largely mixed results. A number of the extant studies on Australian companies which have yielded mixed results are longitudinal studies (Clarkson et al., 2006; Merhebi et al., 2006; Arthur and O'Neill, 2010; Tian and Twite, 2010; Capezio et al., 2011). When considered collectively, these studies examine the CEO remuneration practices in large Australian companies for the period 1990 to 2008. The findings in these studies do not suggest that the pay for performance link has consistently increased over time.

The results of the analysis discussed in this section provide evidence that operating performance is associated with executive remuneration levels in large companies but not small companies. Further, operating performance is associated with change in executive remuneration across all companies regardless of size, however the association is more pronounced in larger companies. Total shareholder return is also associated with executive remuneration in large and mid-sized companies, however not small companies. Therefore this study provides evidence as to the effect of performance on executive remuneration across varying company sizes.

Of interest in this thesis is the role of the remuneration committee, in particular adoption of the ASX remuneration committee recommendations. The results provide evidence that adoption of the ASX remuneration committee recommendations is associated with higher remuneration levels in mid-sized companies. These committees are not associated with remuneration levels in large and small companies. The findings also suggest that adoption of the ASX remuneration committee recommendations is associated with weaker pay for performance sensitivity in large and mid-sized companies, but not small companies.

TABLE 7-16: COMPANY SIZE ANALYSIS – REMUNERATION COMMITTEE EFFECTIVENESS

Panel A	**Model 3 (Remuneration Levels)**					
	Large (N = 135)		Mid (N = 620)		Small (N = 312)	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
ASX Adopter	-0.06	-0.37	0.27	2.62***	0.29	1.12
ROA	1.92	2.52***	-0.08	-1.29	-0.09	-0.96
ROA *ASX Adopter	-2.46	-2.66***	0.03	0.16	0.03	0.26
TSR	-0.30	-2.45**	0.00	-1.07	-0.03	-0.32
Cash Remuneration$_{t-1}$	N/A	N/A	N/A	N/A	N/A	N/A
Insider Shareholding	0.07	1.61*	0.09	2.97***	0.05	0.80
Institutional Shareholding	0.00	1.35	0.01	3.48***	-0.01	-1.02
Company Size	0.34	5.63***	0.24	5.69***	0.40	3.76***
Board Size	0.06	1.48	0.10	2.99***	0.06	0.99
Board Independence	0.57	1.38	0.02	0.11	-0.13	-0.49
Separate Board Chair	-0.27	-1.12	-0.20	-1.59	-0.47	-2.75***
Independent Board Chair	0.35	1.80*	-0.01	-0.01	0.30	1.81*
CEO Entrenchment	-0.09	-0.47	-0.11	-0.59	0.19	0.65
Growth	0.04	1.77*	0.03	1.66*	0.01	0.96
Risk	0.00	0.41	-0.01	-0.80	-0.00	-0.03
Constant	6.07	5.27***	7.61	10.58***	5.72	3.41***
R-squared	0.58		0.25		0.13	
Adjusted R-squared	0.49		0.22		0.06	
F statistic	6.64***		8.39***		1.83***	

*** , **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.

Model 3 (Ln Cash Remuneration) $= \beta_0 + \beta_1 ASX\_Adopter + \beta_2 ROA + \beta_3$ *ASX Adopter** *ROA* $+ \beta_4 TSR + \beta_5$*Insider Shareholding* $+ \beta_6$*Institutional Shareholding* $+ \beta_7$*Company Size* $+ \beta_8$*Board Size* $+ \beta_9$*Board Independence* $+ \beta_{10}$*Separate Board Chair* $+ \beta_{11}$*Independent Board Chair* $+ \beta_{12}$*CEO Entrenchment* $+ \beta_{13}$*Growth* $+ \beta_{14}$*Risk* $+ \beta_{15}$*Industry* $+ \varepsilon$

TABLE 7-16: COMPANY SIZE ANALYSIS – REMUNERATION COMMITTEE EFFECTIVENESS (CONT.)

Panel B	**Model 4 (Pay for Performance Sensitivity)**					
	Large (N = 127)		Mid^ (N = 554)		Small^ (N = 266)	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
ASX Adopter	-0.08	-0.79	0.10	1.79*	0.17	1.29
ΔROA	1.22	3.57***	-0.04	-1.69 *	-0.08	-2.05 **
Δ ROA*ASX Adopter	-2.41	-3.40***	-0.34	-2.30 **	0.10	2.36 *
TSR	-0.20	-2.53***	-0.00	-4.80***	0.04	0.60
Cash Remuneration$_{t-1}$	-0.28	-5.75***	-0.37	-8.03***	-0.51	-10.45 ***
Insider Shareholding	0.02	0.87	0.17	1.00	-0.06	-0.98
Institutional Shareholding	-0.00	-0.60	0.00	2.47**	-0.00	-0.49
Company Size	0.06	1.29	0.11	4.00***	0.18	2.69 ***
Board Size	0.08	2.82***	0.04	2.19**	-0.01	-0.17
Board Independence	0.68	2.52***	-0.00	-0.01	0.06	0.30
Separate Board Chair	-0.01	-0.08	-0.10	-1.49	0.04	0.36
Independent Board Chair	-0.10	-0.78	0.03	0.45	-0.05	-0.34
CEO Entrenchment	0.15	1.12	0.07	0.59	-0.08	-0.45
Growth	0.03	1.93*	0.01	1.07	0.01	1.143
Risk	-0.00	-1.44	-0.01	-1.16	-0.00	-0.02
Constant	2.37	3.07***	1.03	5.10***	3.81	3.46 ***
R-squared	0.44		0.25		0.48	
Adjusted R-squared	0.30		0.21		0.43	
F statistic	3.29***		6.94***		9.29***	

^ White's Adjusted OLS presented. ***, **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.

Model 4(Δ Ln Cash Remuneration) $= \beta_0 + \beta_1 ASX\ Adopter + \beta_2 \Delta ROA + \beta_3 ASX\ Adopter * \Delta ROA + \beta_4 TSR + \beta_5 Ln\ Cash\ Remuneration_{t-1} + \beta_6 Insider\ Shareholding + \beta_7 Institutional\ Shareholding + \beta_8 Company\ Size + \beta_9 Board\ Size + \beta_{10} Board\ Independence + \beta_{11} Separate\ Board\ Chair + \beta_{12} Independent\ Board\ Chair + \beta_{13} CEO\ Entrenchment + \beta_{14} Growth + \beta_{15} Risk + \beta_{16} Industry + \varepsilon$

Where:

Dependent Variable:

Model 3 (Ln Cash Remuneration) = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives.

Model 4 (Δ Ln Cash Remuneration) = One year change in the natural log of cash remuneration for the top five ranked executives between 2007 and 2008

Independent and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ROA = Return on Assets for 2008.

ΔROA =The change in return on assets.

ASX Adopter*ROA = Interaction variable, ASX Adopter * ROA.

ASX Adopter*ΔROA = Interaction variable, ASX Adopter * ΔROA

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Company Size = Natural log of total assets as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Growth = Book value of equity divided by market value of equity, winsorised at 1per cent.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

7.4.2 Shareholder Dissent on the Annual Remuneration Report

The analysis is extended to examine whether shareholder dissent on the annual remuneration report is affected by company size. The results of the analyses are presented in Table 7-17.

The large company shareholder dissent model failed to reach statistical significance. The adjusted R-squared is 5 per cent. ASX adopter is statistically insignificant ($\beta = 0.03$, $t = 0.76$, $p = 0.45$), suggesting that adoption of the ASX remuneration committee recommendations is not associated with shareholder dissent on the annual remuneration report.

The key contributors to shareholder dissent relate to remuneration levels and company performance. Cash remuneration ($\beta = 0.04$, $t = 1.68$) is marginally significant at $p < 0.10$, suggesting that shareholder dissent increases as executive remuneration levels for the top five ranked executives' increases. Return on assets ($\beta = -0.37$, $t = -0.11$) is significant at $p < 0.01$. The negative coefficient means that as company operating performance increases, the company is less likely to receive high levels of shareholder dissent in relation to the annual remuneration report. None of the control variables are statistically significant.

If shareholder dissent on the remuneration report is solely based on the company's executive remuneration practices, the results achieved in the large company sample are consistent with theoretical expectations. That is, ceterus paribus, shareholder dissent is positively associated with high remuneration levels and lower in performing companies. This result is consistent with results of extant research conducted on UK companies, although the prior literature focuses solely on the remuneration of the CEO.

Adoption of the ASX remuneration committee recommendations does not significantly influence this relation.

The model analysing shareholder dissent in mid-sized companies is statistically significant at $p < 0.01$. The adjusted R-squared is 4 per cent. The presence of a remuneration committee adopting the ASX remuneration committee recommendations is statistically insignificant ($\beta = 0.11$, $t = 1.50$, $p = 0.13$). Consequently, as is the case with large companies, adoption of the ASX remuneration committee recommendations does not significantly influence shareholder dissent on the annual remuneration report in medium sized companies.

Cash remuneration is also statistically insignificant ($\beta = 0.00$, $t = 0.09$, $p = 0.93$). Accounting return, ROA, ($\beta = -0.00$, $t = -0.56$, $p = 0.58$) and shareholder return ($\beta = -0.00$, $t = -0.61$, $p = 0.54$) are also statistically insignificant. Of the control variables company size ($\beta = 0.01$, $t = 2.28$) is significant at $p < 0.05$ and institutional shareholding ($\beta = 0.00$, $t = 1.90$) is significant at $p < 0.10$. None of the other control variables are statistically significant. Larger companies in the mid-sized category are associated with higher levels of dissent. Additionally as a company's institutional shareholding increases, so too does the level of shareholder dissent on the annual remuneration report.

Institutional shareholders are encouraged to be proactive and therefore act as substitute monitoring mechanisms. Consequently institutions respond to a combination of company characteristics, including governance factors such as adoption of the ASX Recommendations, when lodging their annual vote on the remuneration report. The results presented in Table 7-17 infer that shareholder dissent on the annual remuneration report in mid-sized companies is not a response to executive remuneration practice or its

oversight, but rather associated with company size and the level of institutional shareholding.

The model for small companies is statistically significant at $p < 0.01$. The adjusted R-squared is 8 per cent. ASX adopter ($\beta = -0.00$, $t = -0.03$, $p = 0.98$) is statistically insignificant. This result is consistent with the results achieved in the large company and medium sized company analyses.

Cash remuneration is also statistically insignificant ($\beta = 0.00$, $t = 0.95$, $p = 0.34$) in small companies. Return on assets ($\beta = -0.00$, $t = -2.35$) is significant at $p < 0.05$, and total shareholder return is significant at ($\beta = -0.01$, $t = -1.87$) at $p < 0.10$. Therefore shareholders in small companies are more focused on company performance as opposed to remuneration awarded to the top five ranked executives. As operating performance and shareholder wealth increases, levels of shareholder dissent on the annual remuneration report are lower.

Company characteristics that are statistically significant are company size and board independence. Company size ($\beta = 0.02$, $t = 2.26$) is significant at $p < 0.05$ and board independence ($\beta = 0.02$, $t = 1.86$) is significant at $p < 0.10$. Therefore as company size increases and the number of independent directors appointed to the board increases the level of shareholder dissent on the annual remuneration report also increases. Overall in small companies, shareholder dissent on the annual remuneration report is associated with company performance and other company characteristics as opposed to the remuneration awarded to the top five ranked executives or adoption of the ASX remuneration committee recommendations.

TABLE 7-17: REMUNERATION COMMITTEES, SHAREHOLDER DISSENT AND COMPANY SIZE ANALYSIS

Model 5 (Shareholder Dissent)	**Large Companies (N = 134)**		**Mid-Size Companies (N = 603)**		**Small Companies (N = 245)**	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
ASX Adopter	0.03	0.76	0.11	1.50	-0.00	-0.03
Cash Remuneration	0.04	1.68*	0.00	0.09	0.00	0.95
ROA	-0.37	-0.11***	-0.00	-0.56	-0.01	-2.35**
TSR	-0.01	-0.28	-0.00	-0.61	-0.01	-1.87*
Insider Shareholding	0.01	1.03	-0.01	-1.54	0.00	0.59
Institutional Shareholding	0.00	0.67	0.00	1.90*	0.00	0.46
Company Size	-0.01	-0.92	0.01	2.28**	0.02	2.26**
Board Size	0.01	0.91	0.00	0.13	0.00	0.84
Board Independence	-0.04	-0.47	0.02	1.28	0.02	1.86*
Constant	-0.16	-0.28	-0.13	-1.65	-0.28	-2.70***
R-squared	0.18		0.07		0.13	
Adjusted R-squared	0.05		0.04		0.08	
F statistic	1.397		2.28***		2.40***	

*** , **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.

$$Shareholder\ Dissent = \beta_0 + \beta_1 ASX\ Adopter + \beta_2 Ln\ Cash\ Remuneration + \beta_3 ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 Company\ Size + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Industry + \varepsilon$$

Where

Dependent Variable:

Shareholder Dissent = The number of negative votes cast on the 2008 annual remuneration report / (number of votes cast for + number of votes cast against the 2008 annual remuneration report).

Independent and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendation regarding committee composition, and zero (0) otherwise

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives.

ROA = Earnings from continuing operations divided by total average assets.

TSR = Dividend adjusted annualised percentage change in stock price

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties and their related parties.

Institutional Shareholding = Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report.

Company Size = Natural log of total assets.

Board Size = Number of directors appointed to the board.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

7.4.3 Company Size Analysis Summary

The company size analysis suggests that company performance is more relevant to executive remuneration to the top five ranked executive in large companies when compared to mid-sized or small companies. The largest predictor of future remuneration across all company sizes is prior year remuneration. Additionally, remuneration committees adopting the ASX remuneration committee recommendations are not associated with moderating remuneration levels or stronger linkage between remuneration and company performance in either large or mid-size companies.

However, these committees are associated with a stronger link between company performance and the remuneration of the top five ranked executives in small companies.

Further, remuneration committees adopting the ASX remuneration committee recommendations are not associated with more effective remuneration practices when viewed from the shareholder perspective. Had shareholders perceived the adoption of the ASX remuneration committee recommendations as being associated with more effective remuneration practices, the coefficient would be negative and significant. However, adoption of the ASX remuneration committee recommendations is statistically insignificant regardless of company size.

Whilst higher levels of remuneration are associated with higher levels of shareholder dissent in large companies, executive remuneration levels are statistically insignificant in small and mid-size companies. As operating performance measured by accounting return (ROA) increased, shareholder dissent in small and large companies decreased. Increases in shareholder wealth is also associated with lower levels of shareholder dissent in small companies. Consequently the analysis indicates that company characteristics other than the formal governance mechanism employed to oversee executive remuneration statistically influence shareholder voting patterns on the annual remuneration report. This conclusion holds true, regardless of company size.

7.5 ROBUSTNESS TESTS

7.5.1 Endogeneity

The decision to adopt the ASX remuneration committee recommendations may not be exogenous as the decision can be influenced by executive remuneration practices of the company and its association with company performance (Sun and Cahan, 2009).

Consequently following Frankel, Kothari and Weber (2006) and Sun and Cahan (2009), a two stage ordinary least squares regression is employed.

As the ASX adopter variable is dichotomous, in the first stage regression, a measure of remuneration committee quality is substituted for the dichotomous variable dependent variable. The substitution is employed on the basis that ordinary least squares cannot facilitate a dependent variable that is dichotomous. The variable *Rem Score* is a composite score which measures remuneration committee quality in the same way as *ASX Adopter*, however it is a continuous variable rather than a dichotomous variable. One point is awarded for each ASX remuneration committee recommendation adopted. The minimum score is zero and the maximum score is four. Table 7-18 summarises the recommendations included in *Rem Score*.

TABLE 7-18: REMUNERATION SCORE COMPONENTS

Recommendations	**Score**
The company should form a remuneration committee	+ 1 if remuneration committee formed
The remuneration committees consists of: • at least three members • the majority of which are independent • an independent chairperson is appointed	 +1 if adopted +1 if adopted +1 if adopted
Maximum Score	**4**

The variables included in the first stage ordinary least squares regression are those variables identified in Chapter 6 as driving the demand for adoption of the ASX remuneration committee recommendations. These variables relate to shareholding characteristics, in particular insider shareholding and institutional shareholding, CEO influence and company size. The inclusion of these variables is also consistent with variables identified in extant research as being relevant to the demand for remuneration

committees (Sun and Cahan, 2009). A new variable (*Rem Comm Rank*) is included in the first stage ordinary least squares regression model as extant research suggests that portfolio rank can be used as an instrumental variable (Hentschel and Kothari, 2001; Sun and Cahan, 2009). Consequently, *Rem Comm Rank* is coded zero (0), one (1) or two (2) based on the portfolio rank of the variable *Rem Score*. The variable Rem Score is sorted in order of size. The portfolio rank is allocated based on size. The lower scores are awarded a rank of 0, the mid-level scores awarded a rank of 1, and the higher scores are awarded a rank of 2.

The second stage regression reflects Models 3 and 4 as detailed earlier in the chapter. However, the variable *Rem Score* included in the second stage ordinary least squares regression is the fitted value derived from the first stage ordinary least squares regression. The two stage ordinary least squares regression models are presented below.

First Stage Regression Model:

$$Rem\ Score = \beta_0 + \beta_1 Insider\ Shareholding + \beta_2 Institutional\ Shareholding + \beta_3 CEO\ Entrenchment + \beta_4 Company\ Size + \beta_5 Rem\ Comm\ Rank + \varepsilon$$

Where:

Dependent Variables:

Rem Score = composite score determined by adding one point for each ASX remuneration committee recommendation adopted, maximum possible score of four.

Independent Variables and Control Variables:

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

CEO Entrenchment = Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report, and zero (0) otherwise.

Company Size = Natural log of total assets as at 30 June 2008.

Rem Comm Rank = portfolio rank based *Rem_Score*, ranks are coded zero (0), one (1) or two (2).

Second Stage Regression Model:

Remuneration Levels:

$$Ln\ Cash\ Remuneration = \beta_0 + \beta_1 Rem\ Score + \beta_2 ROA + \beta_3\ Rem\ Score^{*}\ ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 CEO\ Entrenchment + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Separate\ Board\ Chair + \beta_{11} Independent\ Board\ Chair + \beta_{12} Company\ Size + \beta_{13} Risk + \beta_{14} Industry + \varepsilon$$

Pay for Performance Sensitivity:

$$Ln\ \Delta\ Cash\ Remuneration = \beta_0 + \beta_1 Rem\ Score + \beta_2 \Delta ROA + \beta_3 Rem\ Score^{*} \Delta ROA + \beta_4 TSR + \beta_5 Ln\ Cash\ Remuneraiton_{t-1} + \beta_6 Insider\ Shareholding + \beta_7 Institutional\ Shareholding + \beta_8 CEO\ Entrenchment + \beta_9 Board\ Size + \beta_{10} Board\ Independence + \beta_{11} Separate\ Board\ Chair + \beta_{12} Independent\ Board\ Chair + \beta_{13} Company\ Size + \beta_{14} Risk + \beta_{15} Industry + \varepsilon$$

Where:

Dependent Variables:

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives.

Δ Ln Cash Remuneration = the change in the natural log of the total cash remuneration for the top five ranked executives.

Independent Variables and Control Variables:

Rem Score = The fitted value of the composite score determined by adding one point for each ASX remuneration committee recommendation adopted, maximum possible score of four derived from the first stage OLS model.

Rem Score* ROA = interaction variable where *Rem Score* is multiplied by *ROA.*

Rem Score*ΔROA = interaction variable where *Rem Score* is multiplied by Change in *ROA.*

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ROA = Return on Assets for 2008.

ΔROA = the change in return on assets.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Ln Cash Remuneration$_{t-1}$ = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives for the prior year.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

Company Size = Natural log of total assets as at 30 June 2008.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Table 7-19 presents the second stage regression results. The model examining remuneration levels is significant at $p < 0.01$. The adjusted R-squared is 38 per cent. Rem Score ($\beta = 0.11$, $t = 4.66$) is significant at $p < 0.01$, suggesting that remuneration committees adopting the ASX remuneration committee recommendations are associated with higher executive remuneration.

Return on assets ($\beta = -0.09$, $t = -1.88$) is significant at $p < 0.10$. However, the interaction between Rem Score and ROA ($\beta = 0.02$, $t = 1.06$, $p = 0.29$) is statistically insignificant. Total shareholder return ($\beta = -0.00$, $t = -0.77$, $p = 0.44$) is also statistically insignificant. Therefore adoption of the ASX remuneration committee recommendations does not result in a greater association between executive remuneration and company performance.

Of the control variables, shareholder characteristics and company characteristics are significant. In particular, insider shareholding ($\beta = 0.07$, $t = 2.86$), institutional shareholdings ($\beta = 0.01$, $t = 3.05$), company size ($\beta = 0.29$, $t = 11.42$), board size ($\beta = 0.10$, $t = 3.76$) and the separation of the roles of CEO and board chair ($\beta = -0.34$, $t = -3.64$) are significant at $p < 0.01$ and growth ($\beta = 0.02$, $t = 2.30$) is significant at $p < 0.05$.

Therefore remuneration is positively associated with insider shareholding, institutional shareholding, company size, board size and growth, and moderated by the separation of the roles of board chair and CEO. Consistent with the main analysis adoption of the ASX remuneration committee recommendations does not result in more effective remuneration practice.

The pay for performance model is statistically significant at $p < 0.01$. The adjusted R-squared is 37 per cent. Rem score ($\beta = 0.05$, $t = 3.25$) is significant at $p < 0.01$, suggesting that adoption of the ASX remuneration committee recommendations is associated with increased remuneration.

Return on assets ($\beta = -0.07$, $t = -2.62$) and total shareholder return ($\beta = -0.00$, $t = -6.76$) are also significant at $p < 0.01$, however the interaction between rem score and change in operating performance ($\beta = 0.02$, $t = 0.93$, $p = 0.35$) is statistically insignificant. Therefore whilst change in operating performance and shareholder wealth are associated with changes in executive remuneration, adoption of the ASX remuneration committee recommendations is not associated with stronger linkage between company performance and changes in remuneration awarded to the top five ranked executives.

TABLE 7-19: TWO STAGE OLS RESULTS: REMUNERATION COMMITTEE EFFECTIVENESS

Second Stage OLS Model	**Remuneration Levels** (N=1044)		**Pay for Performance^** (N = 951)	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Rem Score	0.11	4.66***	0.05	3.25***
ROA / Δ ROA	-0.09	-1.88*	-0.07	-2.62***
Rem Score *ROA / Rem Score * Δ ROA	0.02	1.06	0.02	0.93
TSR	-0.00	-0.77	-0.00	-6.76***
Cash Remuneration$_{t-1}$	N/A	N/A	-0.43	-13.22***
Insider Shareholding	0.07	2.86***	0.01	0.97
Institutional Shareholding	0.01	3.05***	0.00	1.62*
Company Size	0.29	11.42***	0.12	6.49***
Board Size	0.10	3.76***	0.04	2.51***
Board Independence	-0.01	-0.08	0.02	0.16
Separate Chair	-0.34	-3.64***	-0.08	-1.32
Independent Chair	0.10	1.19	-0.00	-0.01
CEO Entrenchment	-0.23	-.018	0.01	0.14
Growth	0.02	2.30**	0.01	1.94**
Risk	0.00	0.33	-0.00	-1.51
Constant	6.98	16.99***	3.49	10.49***
R-squared	0.43		0.42	
Adjusted R-squared	0.38		0.37	
F statistic	33.86***		23.75***	

^White's Adjusted OLS results presented. ***, **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.

$Ln\ Cash\ Remuneration = \beta_0 + \beta_1 Rem\ Score + \beta_2 ROA + \beta_3\ Rem\ Score^* ROA + \beta_4 TSR + \beta_5 Insider\ Shareholding + \beta_6 Institutional\ Shareholding + \beta_7 CEO\ Entrenchment + \beta_8 Board\ Size + \beta_9 Board\ Independence + \beta_{10} Separate\ Board\ Chair + \beta_{11} Independent\ Board\ Chair + + \beta_{12} Company\ Size + \beta_{13} Risk + \beta_{14} Industry + \varepsilon$

$Ln\ \Delta\ Cash\ Remuneration = \beta_0 + \beta_1 Rem\ Score + \beta_2 \Delta ROA + \beta_3 Rem\ Score^* \Delta ROA + \beta_4 TSR + \beta_5 Ln\ Cash\ Remuneraiton_{t-1} + \beta_6 Insider\ Shareholding + \beta_7 Institutional\ Shareholding + \beta_8 CEO\ Entrenchment + \beta_9 Board\ Size + \beta_{10} Board\ Independence + \beta_{11} Separate\ Board\ Chair + \beta_{12} Independent\ Board\ Chair + + \beta_{13} Company\ Size + \beta_{14} Risk + \beta_{15} Industry + \varepsilon$

Where:

Dependent Variables:

Ln Cash Remuneration = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives.

Δ Ln Cash Remuneration = the change in the natural log of the total cash remuneration for the top five ranked executives.

Independent Variables and Control Variables:

Rem Score = The fitted value of the composite score determined by adding one point for each ASX remuneration committee recommendation adopted, maximum possible score of four, derived from the first stage OLS model.

Rem Score* ROA = interaction variable where *Rem Score* is multiplied by *ROA.*

Rem Score*ΔROA = interaction variable where *Rem Score* is multiplied by Δ*ROA.*

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.

ROA = Return on Assets for 2008.

ΔROA = the change in return on assets.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Ln Cash Remuneration$_{t-1}$ = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives for the prior year.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

Company Size = Natural log of total assets as at 30 June 2008.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

Prior year remuneration (β = -0.43, t = 13.22) is significant at $p < 0.01$, and remains a key determinant of changes in executive remuneration. Company size (β = 0.12, t = 6.49) and board size (β = 0.04, t = 2.51) are significant at $p < 0.01$, growth (β = 0.01, t = 1.94) is significant at $p < 0.05$, and institutional shareholding (β = 0.00, t = 1.62) is marginally significant at $p < 0.10$. The remaining control variables are statistically insignificant.

Overall, after controlling for engodgeneity, the results confirm the conclusion drawn in the main analysis.

7.5.2 Committee Effectiveness - Alternate Dependent Variable

Extant literature identifies alternate base models which can be used to examine executive remuneration. Whilst the main analysis uses a single continuous variable (change in total cash remuneration), a scaled variable is also used. Consistent with Jensen and Murphy (1990) and Clarkson et al. (2011), a scaled variable is incorporated as the dependent variable to assess the association between the remuneration committee and the pay for performance sensitivity for the top five ranked executives. The scaled dependent variable is measured as change in cash remuneration divided by market capitalisation. This allows for the sensitivity in the change in remuneration for the top five ranked executives to be examined against changes in shareholder wealth (Clarkson et al., 2011). The independent variables incorporated into the scaled models are the same as the independent variables used in Model 5.

The scaled model examines the remuneration committee's efficacy related to pay for performance sensitivity of the top five ranked executives. The full results are included at Table 7-20. The amended pay for performance sensitivity model is statistically significant at $p < 0.01$. The adjusted R-squared is 8 per cent.

The presence of a remuneration committee adopting the ASX remuneration committee recommendations (β = -68.42, t = -0.07, p = 0.94) is statistically insignificant, as is the interaction between these committees and company performance (β = -308.25, t = -0.16, p = 0.76). Prior year remuneration (β = -801.31, t = -3.78) is the only significant variable in the model at $p < 0.01$.

The results suggest that the presence of a remuneration committee that adopts the ASX remuneration committee recommendations does not result in stronger pay for performance sensitivity for the top five ranked executives. This result is consistent with the results achieved in the main analysis at 7.3.2.

TABLE 7-20: PAY FOR PERFORMANCE SENSITIVITY MODEL – SCALED DEPENDENT VARIABLE

Model 4 (Pay for Performance) N = 989	**Expected Sign**	**Coefficient**	***t*-statistic**
ASX Adopter	+/-	-68.42	-0.07
ΔROA	+/-	1949.44	1.08
ASX Adopter* Δ ROA	+	-308.25	-0.16
Ln Cash Remuneration$_{t-1}$	+	-801.31	-3.78***
TSR	+	-0.06	-0.10
Insider Shareholding	-	16.04	0.06
Institutional Shareholding	+	-38.43	-1.47
Company Size	+	-522.05	-1.29
Board Size	-	-37.58	-0.11
Board Independence	-	-357.77	-0.13
Separate Board Chair	-	2396.06	1.34
Independent Board Chair	-	-691.51	-0.73
CEO Entrenchment	+	-1253.51	-1.27
Growth	+	288.68	0.82
Risk		-2.49	-0.50
Constant		20962.64	2.88***
R-squared		0.10	
Adjusted R-squared		0.08	
F statistic		4.41***	
*** , **, * denotes significance at 1, 5 and 10 per cent respectively. Industry effects not presented.			
Δ *Cash Remuneration*$_2$ = β_0 + β_1*Rem Score* + $\beta_2\Delta$*ROA* + β_3*Rem Score**Δ*ROA* + β_4*TSR* + β_5*Ln Cash_Remuneraiton*$_{t-1}$ + β_6*Insider Shareholding* + β_7*Institutional Shareholding* + β_8*CEO Entrenchment* + β_9*Board Size* + β_{10}*Board Independence* + β_{11}*Separate Board Chair* + β_{12}*Independent Board Chair* + β_{13}*Company Size*+ β_{14}*Risk* + β_{15}*Industry* + ε			

Where

Dependent Variables:

Δ Cash Remuneration$_2$ = change in cash remuneration divided by market capitalisation.

Independent Variables and Control Variables:

ASX Adopter = Dichotomous variable, coded one (1) if the company has adopted all three guidelines included in the ASX Adopter*Δ ROA = interaction variable where *ASX Adopter* is multiplied by Δ*ROA.*

ASX Recommendations regarding committee composition, and zero (0) otherwise.

ΔROA = the change in return on assets.

TSR = Dividend adjusted annualised percentage change in stock price for the year ended 30 June 2008.

Ln Cash Remuneration$_{t-1}$ = Natural log of salary, superannuation, fringe benefits and cash bonuses paid to the top five ranked executives for the prior year.

Insider Shareholding = Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties.

Institutional Shareholding = Percentage of shareholding by institutional entities identified from the top twenty shareholders disclosed in the 2008 annual report as at 30 June 2008.

Board Size = Number of directors appointed to the board, as at 30 June 2008.

Board Independence = The number of independent directors appointed to the board divided by the total number of directors appointed to the board, as at 30 June 2008.

Separate Board Chair = Dummy variable coded one (1) if the roles of the CEO and Board chairperson are performed by different people, and zero (0) otherwise.

Independent Board Chair = Dummy variable coded one (1) if the Board chairperson holding office as at 30 June 2008 is an independent director, and zero (0) otherwise.

Company Size = Natural log of total assets as at 30 June 2008.

Risk = The company's five year average beta relative to the MSCI emerging markets index, as at 30 June 2008.

Industry = Indicator variable for Global Industry Classification Standard (GICS) industry sector.

7.6 SUMMARY

This chapter presents evidence regarding the efficacy of remuneration committees adopting the ASX remuneration committee recommendations. The analysis presented in this chapter address the second and third research questions. The second research question focused on whether adoption of the ASX remuneration committee recommendations influences the level of remuneration and linkage to company performance in remuneration awarded to the top five ranked executives. The third research question considers whether adoption of the ASX remuneration committee recommendations is negatively associated with shareholder dissent on the annual remuneration report.

Hypothesis 6a and 6b operationalise the second research question. The findings in relation to the full sample suggest that adoption of the ASX remuneration committee recommendations is associated with the level of remuneration awarded to the top five ranked executives in 2008. In particular, adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration. Consequently, as Hypothesis 6(a) does not predict the direction of the association support for Hypothesis 6a is found in the analysis of the full sample. Hypothesis 6b examined whether adoption of the ASX remuneration committee recommendations is associated with stronger linkage between remuneration and company performance. No support was found for Hypothesis 6b in the full sample.

Adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration in companies identified as paying excessive remuneration to their executives. However, remuneration committees in these companies are also associated with stronger linkage between remuneration and company performance in companies that pay excessive levels of remuneration to their executives. Therefore support for Hypothesis 6a is found, and some support for Hypothesis 6b is found. However, the support for Hypothesis 6b is limited to companies that pay excessive levels of remuneration to the top five ranked executives.

The results also suggest that the association between executive remuneration of adoption of the ASX remuneration committee recommendations varies depending on whether the company is experiencing positive or negative operating performance. In companies with positive return on assets, adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration and weaker pay for performance sensitivity in remuneration awarded to the top five ranked executives.

Adoption of the ASX remuneration committee recommendations is not significantly associated with either remuneration levels or pay for performance sensitivity in companies with negative return on assets. Therefore support is found for 6a in companies with positive return on assets, however no support is found for Hypothesis 6b. In companies with negative return on assets no support is found for either Hypothesis 6a or 6b.

The company size analysis suggests that remuneration committees adopting the ASX remuneration committee recommendations do not result in more effective remuneration practices in either large or mid-size companies, however do result in a greater link between company performance and the remuneration of the top five ranked executives in small companies. Again, limited support for Hypothesis 6b is found.

Overall, only limited support at best is found regarding the proposition that adoption of the ASX remuneration committee recommendations ensure the company implements appropriate remuneration arrangements. This conclusion is consistent with Clarkson et al. (2011), who report that strengthening of the company's governance structure, measured by factors including board independence and the presence of a remuneration committee, plays a limited or insignificant role in the oversight of executive remuneration. Further research is required to determine whether the findings of this study remain persistent over time.

The final research question considers whether adoption of the ASX remuneration committee recommendations is associated with lower levels of shareholder dissent on the annual remuneration report. Hypothesis 7 operationalises the final research question. The results of the shareholder dissent analysis provides evidence that the

presence of a remuneration committee adopting the ASX remuneration committee recommendations is not statistically significant to shareholder dissent, unless the company pays excessive remuneration. In companies identified as paying excessive remuneration to the top five ranked executives, adoption of the ASX remuneration committee recommendations is associated with lower levels of shareholder dissent on the annual remuneration report. Overall, the findings provide only limited support for Hypothesis 7.

A summary of the findings is included at Appendix 3. The following chapter summarises the main points of the thesis, identifies limitations related to the analyses, explores opportunities for future research and concludes the thesis.

8. Discussion and Conclusion

8.1 INTRODUCTION

This chapter presents a summary of the thesis, recognises the limitations of the study, discusses the implications of the study's findings and explores opportunities for future research. The chapter is presented as follows. Section 8.2 outlines the motivation, research question and contribution of the study. Section 8.3 summarises the results of the hypotheses testing, with the implications of the results discussed in Section 8.4. Section 8.5 outlines the limitations of the study. The chapter concludes in Section 8.6, which explores opportunities for future research.

8.2 SUMMARY OF THE MOTIVATION, RESEARCH QUESTION AND CONTRIBUTION

The effective oversight of executive remuneration has been the subject of regulatory policy debate for decades. Whilst the board of directors is ultimately responsible for the oversight of executive remuneration, the remuneration committee is seen as an appropriate and efficient mechanism to assist the board in ensuring effective and responsible remuneration practices (ASX Corporate Governance Council, 2007). The ASX remuneration committee recommendations suggest companies should form a remuneration committee of at least three members, the majority of members should be independent directors, and the committee should have an independent chairperson appointed (ASX Corporate Governance Council, 2007).

The revised version of the ASX Recommendations, released in 2010 (Australian Corporate Governance Council, 2010), strengthens the independence recommendation related to the remuneration committee by suggesting that executive directors should not be appointed to the committee unless necessary. Further, the ASX Recommendations

suggest that companies should ensure that the remunerating policy adopted "motivate senior executives to pursue the long term growth and success of the company and demonstrate a clear relationship between senior executive performance and remuneration" (ASX Corporate Governance Council, 2007, p. 35). The ASX remuneration committee recommendations promote investor confidence by encouraging corporate behaviour that limits the ability for executives acting opportunistically with regard to their remuneration and by promoting remuneration arrangements that ensure the interest of shareholder and managers are aligned.

This thesis identifies factors associated with the decision to form a remuneration committee and to adopt the ASX remuneration committee recommendations. Further, the thesis examines whether adoption of the ASX remuneration committee recommendations achieves their purpose. As the ASX remuneration committee recommendations are grounded in agency theory, an agency theoretical framework is used to examine factors influencing the decision to voluntarily adopt the ASX remuneration committee recommendations. The thesis also analyses the association between adoption of the ASX remuneration committee recommendations and executive remuneration practices for the top five ranked executives. Shareholder perceptions regarding adoption of the ASX remuneration committee recommendations and executive remuneration is also examined.

The research questions posed by this thesis examine (1) the adoption of the ASX remuneration committee recommendations regarding (a) formation and (b) composition of the remuneration committee, (2) how adoption of the ASX remuneration committee recommendations influences remuneration levels and pay for performance sensitivity in executive remuneration, and (3) whether adoption of the ASX remuneration committee

recommendations are negatively associated with shareholder dissent regarding remuneration practices.

This study is motivated by a number of factors. First researchers, investors and regulators continue to question the effectiveness of existing regulation of executive remuneration and its oversight (Windsor and Cybinski, 2009; Bebchuk and Weisbach, 2010; Australian Productivity Commission, 2010). Regulatory intervention for remuneration reporting has occurred partly because of public dissatisfaction with perceived excessive executive remuneration, particularly where company performance is low. Despite the important role of the remuneration committee in the governance of executive remuneration, research into its operation in Australia has been limited. The existing body of literature is insufficient to make broad generalisations regarding the overall efficacy of the ASX remuneration committee recommendations in a voluntary setting. Further research is required to enable a detailed understanding of the determinants, quality, operation and efficacy of remuneration committees. Consequently, testing whether remuneration committees are effective at aligning the interest of shareholders and executives remains an open and important research goal (Conyon, 2011).

This study contributes to the existing literature in a number of ways. A comprehensive examination is undertaken of the factors influencing the decision to voluntarily form a remuneration committee in the Australian setting. The analysis is extended to examine the structure of the remuneration committee consistent with the ASX remuneration committee recommendations regarding size and independence. Much of prior theoretical and empirical studies have been conducted in the United States (Kang et al., 2007; Guest, 2008; Sapp, 2008; Bebchuk and Weisbach, 2010),

which mandates the formation and structure of a remuneration committee. Conducting analysis in the Australian voluntary compliance setting enriches the current research by providing an insight as to how governance choices are made and whether the choices are the related to appropriate executive remuneration practices.

The thesis informs the policy discussion and development by examining the efficacy of allowing companies choice in adopting governance practices. In addition, the study provides insight into the role of the remuneration committee in ensuring executive remuneration practices is acceptable to shareholders.

Additionally, the thesis provides detailed descriptive material on the level of adoption of voluntary recommendations relating to the remuneration committee for all listed companies. The diverse sample used in this study provides an incremental contribution to the current literature. Prior research has focused on smaller samples of larger, more established companies (Conyon and Peck, 1998; Daily et al., 1998; Anderson and Bizjak, 2003). A broad sample of listed Australian companies is used, reflecting a range of company sizes and ages.

A significant component of the existing research into executive remuneration focuses solely on CEO remuneration practices (Frydman and Saks, 2010). Another contribution of this research is that it examines remuneration for a wider group of executives. The remuneration committee monitors and advises the board of directors on overall remuneration practice, not only for the CEO. Additionally, the annual shareholder advisory vote is on the company's remuneration report, which incorporates disclosures regarding remuneration practices of the remuneration practices for key senior executives, which incorporates the directors, CEO and other identified senior

executives. Therefore, it is relevant to consider the remuneration of a broader group of senior executives in assessing the performance of the remuneration committee.

This thesis also contributes to the existing literature in its approach to examining executive remuneration. Prior studies have examined the levels of remuneration and the link between pay and performance. This approach is followed in this thesis; however, the outcome of the non-binding shareholder vote on the annual remuneration report is also used as means of measuring the appropriateness of remuneration. This annual non-binding vote represents an opportunity for shareholders to express their satisfaction or otherwise with company remuneration practice. By extension, the vote is an indicator of how effectively the board and the remuneration committee have been in mitigating agency problems. Research regarding the company's response and the effect of the non-binding vote is scarce in Australia, but is also of interest to other jurisdictions for example, the US and UK.

Finally, prior Australian studies were conducted prior to, or immediately after, the introduction of the ASX Recommendations in 2003. Consequently the studies were conducted when the ASX Recommendations did not exist or were arguably in the early stages of implementation. The sample used is drawn from a period in which the ASX Recommendations have had sufficient time to be assessed and embedded in companies' overall governance framework and practice.

8.3 SUMMARY OF KEY RESULTS

Regulatory policy related to executive remuneration is focused on minimising opportunistic behaviour of executives regarding their remuneration and aligning the interests of shareholders and executives. Therefore, an agency framework is used to address the research questions posed by the study. Seven hypotheses are developed to

test the research questions. The study uses a sample of 1,497 companies listed on the Australian stock exchange as at 30 June 2008.

Logistic and linear multivariate regression analyses are used to examine the data. Logistic regression is used in examining factors associated with adoption of the ASX remuneration committee recommendations (formation and composition). Ordinary least squares regression is used to examine whether adoption of the ASX remuneration committee recommendations moderates remuneration levels and strengthens the link to company performance. Ordinary least squares regression is also used to analyse the relation between agency costs, adoption of the ASX remuneration committee recommendations and remuneration practice.

Hypotheses 1 to 4 consider the impact of agency costs on adoption of the ASX remuneration committee recommendations. Hypothesis 5 considers the impact of board capacity on adoption of the ASX remuneration committee recommendations. The dependent variable in the formation analysis is a dichotomous variable identifying whether companies have formed a remuneration committee. The dependent variables in the composition analysis is also a dichotomous variable, however it identifies whether the company has adopted all three of the ASX remuneration committee composition recommendations. In the formation analysis the full sample is used, the composition analysis includes only those companies that have formed a remuneration committee.

In the formation analysis, support is found for Hypotheses 1b and 1c. Companies respond to agency demand related to shareholder characteristics, in particular insider shareholding and institutional shareholding, by forming a remuneration committee. Contrary to theoretical predictions, companies do not form a remuneration committee in response to agency costs associated with shareholder dispersion (H1a), CEO

entrenchment (H2), company complexity (H3), growth (H4a) free cash flows (H4b) and asset turnover (H4c). Also contrary to predictions, board capacity related to board size (H5a) is not significant to the decision to form a remuneration committee. However, board capacity related to the availability of independent directors (H5b), rather than board size (H5a) or agency costs (H1 to 4), is highly significant to the decision to adopt the ASX remuneration committee composition recommendations.

The results suggest that agency costs and board capacity are incrementally relevant to adoption of the ASX remuneration committee recommendations, after controlling for company characteristics related to size, governance quality, the appointment of a big 4 auditor and leverage. The results also indicate that companies are less likely to form a remuneration committee and are less likely to adopt the ASX remuneration committee recommendations in response to shareholder dissent on the annual remuneration report.

The analysis then considers the efficacy of the remuneration committee. Ordinary least squares regression is used in the analysis of Hypothesis 6 and 7. The full sample is used in the analysis. In the analysis of Hypotheses 6 and 7, only those companies included in the full sample that pay remuneration are included in the analysis. Two dependent variables are incorporated to test Hypothesis 6. The first dependent variable is the natural logarithm of total cash remuneration paid to the top five ranked executives and the second dependent variable is the change in the total cash remuneration paid to the top five ranked executives. Contrary to theoretical predications, in the full sample adoption of the ASX remuneration committee recommendations does not lead to more effective remuneration practices. Particularly, adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration and in some cases with excessive levels of remuneration. As an association between the level

of remuneration awarded to the top five ranked executives and adoption of the ASX remuneration committee recommendations is found, Hypothesis 6a is supported. However, adoption of the ASX remuneration committee recommendations is not generally associated with a stronger alignment between executives' remuneration and company performance for the top five ranked executives. Therefore no support for Hypothesis 6b is found in the full sample.

Partial support for Hypothesis 6b is found in relation to companies identified as paying excessive remuneration and small companies. These companies are associated with stronger linkage between remuneration and company performance.

The results provide evidence that adoption of the ASX remuneration committee recommendations is associated with higher remuneration levels in mid-sized companies (H6a). These committees are not associated with remuneration levels in large and small companies (H6a). The findings also suggest that adoption of the ASX remuneration committee recommendations is associated with weaker pay for performance sensitivity in large and mid-sized companies, but not small companies (H6b).

When the sample is partitioned into companies with positive and negative return on assets, the analysis provides limited support for Hypothesis 6a. In particular, the results of the analysis indicate that adoption of the ASX remuneration committee recommendations is associated with higher levels of remuneration in companies with positive return on assets. However, in companies with negative return on assets adoption of the ASX remuneration committee recommendations is insignificant. Therefore support for Hypothesis 6a is found in relation to companies with positive return on assets, however no in relation is found in companies with negative return on assets. No support was found for Hypothesis 6b.

Hypothesis 7 examined remuneration committee efficacy from the shareholders' perspective. The full sample was used in the analysis. Hypothesis 7 is not supported. In particular, adoption of the ASX remuneration committee recommendations is not negatively associated with shareholder dissent on the annual remuneration report. Interestingly, company characteristics other than executive remuneration and its oversight were associated with shareholder dissent on the annual remuneration report.

The results suggest that agency costs and capacity are relevant to adoption of the ASX remuneration committee recommendations. However, these committees are not universally associated with more effective remuneration practice.

8.4 IMPLICATIONS

The analysis of the individual composition components highlights that whilst the number of directors serving on the board is relevant, availability of independent directors is the key determinant to adoption of the ASX remuneration committee composition recommendations. Consequently, the ability of companies to adopt the ASX remuneration committee recommendations regarding committee formation and composition is likely to result in increased costs for those companies that need to increase the number of independent directors serving on their board in order to adopt the recommendations.

Larger companies have an increasingly higher adoption rate. Adoption of the ASX remuneration committee recommendations reduces as company size decreases. The higher adoption rate is also attributable to the fact that larger companies have the capacity to adopt the ASX remuneration committee recommendations. Adoption of the ASX remuneration committee recommendations for smaller companies is likely to

result in increased costs for these companies. Therefore the burden is greater for smaller companies.

Board capacity is the key predictor of adoption of all ASX remuneration committee composition recommendations, regardless of company size. Consequently policy focus in relation to small to mid-sized companies should focus on quality board appointments which would then enhance the oversight of executive remuneration in those companies where the additional cost of increasing either the board size or the number of independent directors is not considered beneficial to the company. This would increase the effectiveness of executive remuneration oversight, without necessarily increasing the burden for companies with less capacity to adopt the ASX remuneration committee recommendations.

The findings also provide evidence that the vast majority of the largest companies had formed independent remuneration committees some three years prior to the implementation of the mandated rules affected in 2011. The new rules are deliberately targeted at the largest three hundred companies on the basis that these companies are the focus of community concern regarding excessive remuneration and account for some ninety-six per cent of the total market capitalisation of all companies listed on the ASX (Australian SecuritiesExchange, 2010). If this is the case, the new rules simply mandate a practice that was largely already in existence. If these companies were also the perpetrators of excessive and irresponsible remuneration practices, they did so whilst having constituted an independent remuneration committee.

The study demonstrates that influence on executive remuneration of adoption of the ASX remuneration committee recommendations varies cross-sectionally depending on company characteristics. Consequently adoption of the ASX remuneration committee

recommendations may not be optimal for all companies. The findings also demonstrate that independent remuneration committees are not as effective as policy infers at managing the remuneration of the top five ranked executives. Policy implications from this research suggest that rather than focusing solely on independence as a key indicator of remuneration committee quality, the focus should also be on ensuring the quality of the remuneration committee. That is, ensuring that the board members appointed to the committee have the appropriate skills and expertise to provide effective oversight of the executive remuneration function. Whilst the formation and composition of remuneration committees can be mandated, behaviour and relationships cannot be effectively regulated (Spira and Bender, 2004). Independence in itself does not appear to be the optimal solution to curtailing inappropriate executive remuneration practice.

Additionally, given the lack of research in the Australian context, prior to embarking on further reform, regulators should examine the efficacy of existing regulation. International and Australian research provides mixed evidence at best as to whether independent remuneration committees achieve more effective remuneration practice. Additionally, limited evidence exists as to the drivers of shareholder dissent on the annual remuneration report in Australia and whether regulation in this regard is achieving its purpose. It is not suggested the further regulation is not required, but rather that insufficient evidence exists upon which to make generalisable conclusions regarding the efficacy of existing regulation related to executive remuneration oversight.

8.5 RESEARCH LIMITATIONS

This section discusses the potential limitations of the study. Limitations exist in relation to potential measurement error and causation. Some degree of measurement error is associated with all variables used in multivariate regression (Hair et al, 2010). In order to reduce measurement error, the constructs have been distilled from extant research in order to maximise the reliability and validity of the measures used to test the hypotheses. Whilst an attempt was made to incorporate all relevant company characteristics, causation cannot be inferred. There may be other factors not considered by this study that are relevant to adoption of the ASX remuneration committee recommendations and the efficacy of these remuneration committees. For example, more sophisticated techniques, for example principle component analysis, could be incorporated to measure governance quality and remuneration committee quality.

Further, alternative measures exist with regard to certain variables included in the analyses. In particular, alternate measures of shareholder dispersion, CEO tenure and measures of company complexity may change the results achieved should they be incorporated into the analyses.

Directors were classified as independent based on whether they were identified as being independent in the annual report. Multiple definitions of director independence exist and whilst companies often adopt the definition proposed by the ASX, an independent verification as to whether companies adopted the ASX definition of independence was not undertaken. Future research may consider ensuring a uniform measure of director independence is incorporated into the analyses.

Whilst the sample size was large and representative of a diverse range of company age and sizes, the sample was limited to companies with a 30 June balance date.

Additional research could be extended to include those companies with a non 30 June balance date.

The study is a cross sectional study. As one year of data is incorporated in the analysis, the sensitivity of remuneration to company performance and overall generalisability of the study's findings is limited by this fact.

The thesis considers a time period when adoption of the ASX remuneration committee recommendations was voluntary, therefore the findings are not necessarily generalisable to settings where remuneration committee independence is mandated such as in the US or for large Australian companies post 2011. However, the analysis regarding committee efficacy is generalisable in the Australian setting particularly, and of relevance to other institutional settings with similar governance models.

This study incorporates an agency framework on the basis that the ASX remuneration committee recommendations are agency focused. However, agency theory may not on its own fully explain determinants of adoption of the ASX remuneration committee recommendations and their efficacy (Main et al., 2008). Other complementary theories may also be relevant. Further, agency theory is relevant to countries that adopt an Anglo-American model of corporate governance. The results are not necessarily generalisable to institutional settings that adopt alternate models of corporate governance such as Europe and Asia.

Ordinary least squares regression is used to analyse Hypotheses 6 and 7. Other statistical tools, for example, panel data could be used in the analysis. Whilst testing was performed to confirm the results are not affected by endogeneity, other statistical methods may produce more robust results. For example, some researchers argue that the generalised methods of moments approach addresses shortcomings associated with

using ordinary least squares regression, when ordinary least squares regression is used to analyse the pay for performance sensitivity in executive remuneration modelling (Capezio et al., 2011).

8.6 OPPORTUNITIES FOR FUTURE RESEARCH

A number of potential further research opportunities exist. The study could be extended to consider whether corporate behaviour and the efficacy of remuneration committees has changed following the introduction of the mandated rules for the companies included in the ASX 300 Index. An additional extension of this study would be a longitudinal study to determine whether the results of this study are persistent over time or limited to a particular time period.

As noted in the preceding section the thesis uses an agency framework to examine the research questions posed. Consideration of other complementary theories could be examined and incorporated as an extension to the study.

The analysis on executive remuneration related to Hypotheses 6 and 7 uses total cash remuneration and change in total cash remuneration as the dependent variable in the regression models. The study could be extended to incorporate the individual components of executive remuneration, for example salary, short term incentives and long term incentives to investigate the relation between the remuneration committee and the individual components of executive remuneration. The study could also be extended to incorporate total remuneration which would capture cash and non cash components of executive remuneration. Further the remuneration arrangements of the CEO and the remaining four key executives could be analysed separately to examine whether differences arise in remuneration committee operation and shareholder voting behaviour based on the CEO verses the wider senior executive team.

Overall, a number of potential future research opportunities have been identified. Despite executive remuneration and its oversight being a topical and contested issue, very little research exists. Consequently, significant opportunities for future research in this area exist.

This Chapter concludes this thesis.

Bibliography

Adams, R. B., Hermalin, B. E., and Weisbach, M. S. (2010). "The Role of Boards of Directors in Corporate Governance: A Conceptual Framework and Survey". *Journal of Economic Literature*, 48(1), 58-107.

US Senate Committee on Banking Housing and Urban Affairs (2010). "Brief Summary of the Dodd Frank Wall Street Reform and Consumer Protection Act". http://banking.senate.gov/public/_files/0701110_Dodd_Frank_Wall_Street_remform_comprensive_summary_Final.pdf

Agrawal, A., and Knoeber, C. R. (1996). "Firm Performance and Mechanisms to Control Agency Problems between Managers and Shareholders". *The Journal of Financial and Quantitative Analysis*, 31(3), 377-397.

Aguilera, R. V., and Cuervo-Cazurra, A. (2009). "Codes of Good Governance". *Corporate Governance: An International Review*, 17(3), 376-387. doi: 10.1111/j.1467-8683.2009.00737.x

Anderson, R. C., and Bizjak, J. M. (2003). "An Empirical Examination of the Role of the CEO and the Compensation Committee in Structuring Executive Pay". *Journal of Banking & Finance*, 27(7), 1323-1348.

Ang, J. S., Cole, R. A. and Lin, J. W. (2000) "Agency Costs and Ownership Structure", *Journal of Finance*, 55, 81–106.

Armstrong, C. S., Guay, W. R., and Weber, J. P. (2010). "The Role of Information and Financial Reporting in Corporate Governance and Debt Contracting". *Journal of Accounting and Economics*, 50(2-3), 179-234.

Armstrong, C. S., Ittner, C. D., and Larcker, D. F. (2012). "Corporate Governance, Compensation Consultants, and CEO Pay Levels". *Review of Accounting Studies*, 17, 322-351. doi: 10.1107/s1142-012-9182y

Arthur, N., and O'Neill, P. (2010). "Bonus Caps, Corporate Governance and Pay-Performance Sensitivity". Unpublished paper. The University of Sydney. Sydney.

Australian Accounting Standards Board. (2007). Australian Accounting Standard AASB 124 "Related Party Disclosures".

Australian Accounting Standards Board. (2010). Australian Accounting Standard AASB 2 "Share Based Payments".

Australian Corporate Governance Council. (2003). "Corporate Governance Principles and Recommendations " (first edition).

Australian Corporate Governance Council. (2007). "Corporate Governance Principles and Recommendations" (second edition).

Australian Corporate Governance Council. (2010). "Corporate Governance Principles and Recommendations, with 2010 Amendments" (second edition).

Australian Federal Government. (2011) "Corporations Amendment (Improving Accountability of Director and Executive Remuneration) Bill" *(Cth)*

Australian Productivity Commission. (2010). "Executive Remuneration in Australia" Productivity Commission Inquiry Report. Melbourne.

Australian Stock Exchange. (2010). ASX Exposure Draft 22.04.10 "Listing Rule Amendments - New Requirements for Remuneration Committee and a Company Trading Policy". Sydney: Australian Stock Exchange Retrieved from http://www.asxgroup.com.au/media/PDFs/20100422_exposure_draft_listing_rule_amendments.pdf.

Australian Stock Exchange, "ASX Listing Rules". http://www.asxgroup.com.au/asx-listing-rules-guidance-notes-and-waivers.htm

Barkema, H. G., and Gomez-Mejia, L. R. (1998). "Managerial Compensation and Firm Performance: A General Research Framework". *The Academy of Management Journal*, 41(2), 135-145.

Bathala, C. T., and Rao, R. P. (1995). "The Determinants of Board Composition: An Agency Theory Perspective". *Managerial and Decision Economics*, 16(1), 59-69.

Bebchuk, L.A, and Fried, J.M (2003). "Executive Compensation as an Agency Problem". *The Journal of Economic Perspectives*, 17(3), 71-92.

Bebchuk, L.A, and Weisbach, M.S (2010). "The State of Corporate Governance Research". *The Review of Financial Studies*, 23(12), 939-961.

Beekes, W., Hong, A., and Owen, S. A. (2010). "An Alternative Measure of Corporate Governance Using Discrete Principal Component Analysis ". SSRN Working Paper. Retrieved from SSRN: http://ssrn.com/abstract=1623005

Benito, A., and Conyon, M.J (1999). "The Governance of Directors' Pay: Evidence from UK Companies". *Journal of Management & Governance*, 3(2), 117-136. doi: 10.1023/a:1009995710541

Berry, T. K., Paige, F. L., and Wilkins, M. S. (2006). "The Interaction Among Multiple Governance Mechanisms in Young Newly Public Firms". *Journal of Corporate Finance*, 12(3), 449-466. doi: 10.1016/j.jcorpfin.2005.08.003

Bhagat, S., and Bolton, B. (2008). "Corporate Governance and Firm Performance". *Journal of Corporate Finance*, 14(3), 257-273.

Bilimoria, D., and Piderit, S. K. (1994). "Board Committee Membership: Effects of Sex-Based Bias". *The Academy of Management Journal*, 37(6), 1453-1477.

Bonet, R., and Conyon, M. (2005). "Compensation Committees and Executive Compensation: Evidence from UK Publicly Traded Firms". In K. Keasey, S. Thompson & M. Wright (Eds.), Corporate Governance: Accountability, Enterprise and International Comparisons. West Sussex: Jon Wiley & Sons Ltd.

Boone, A. L., Field, L., C, Karpoff, J. M., and Raheja, C. G. (2007). "The Determinants of Corporate Board Size and Composition: An Empirical Analysis". *Journal of Financial Economics*, 85(1), 66-101.

Bosch, H. (2002). "The Changing Face of Corporate Governance". University of New South Wales Law Journal, 25(2), 270-293. online.

Brennan, N. M. a., and Solomon, J. (2008). "Corporate Goveranance, Accountability and Mechanisms of Accountability: An Overview". *Accounting, Auditing and Accountability Journal*, 21(7), 885-906. doi:10.1108 109513570810907401.

Brick, I. E., Palmon, O., and Wald, J. K. (2006). "CEO Compensation, Director Compensation, and Firm Performance: Evidence of Cronyism?". *Journal of Corporate Finance*, 12(3), 403-423. doi:10.1016/j.jcorpfin.2005.08.005.

Brown, P., Beekes, W., and Verhoeven, P. (2011). "Corporate Governance, Accounting and Finance: A Review". *Accounting & Finance*, 51(1), 96-172. doi: 10.1111/j.1467-629X.2010.00385.x

Bushman, R., Chen, Q., Engel, E., and Smith, A. (2004). "Financial Accounting Information, Organizational Complexity and Corporate Governance Systems". *Journal of Accounting and Economics*, 37(2), 167-201. doi: 10.1016/j/jacecco.2003.09.005.

Capezio, A., Shields, J., and O'Donnell, M. (2011). "Too Good to be True: Board Structural Independence as a Moderator of CEO Pay-for-Firm-Performance". *Journal of Management Studies*, 48(3), 487-513. doi: 10.1111/j.1467-6486.2009.00895.x

Capezio, A., Shields, J., and O'Donnell, M. (2009). "CEO Pay Performance Sensitivity in Australian Listed Companies 1999 to 2005". http://www.mngt.waikato.ac.nz/departments/Strategy%20and%20Human%20Resource%20Management/airaanz/proceedings/auckland2007/058.pdf

Carson, E. (2002). "Factors Associated with the Development of Board Subcommittees". *Corporate Governance An International Review*, 10(1), 4-18.

Carter, M. E., and Zamora, V. (2009). "Shareholder Remuneration Votes and CEO Compensation Design. ". Boston University Working Paper. Working Paper. Boston University, Boston.

Chalmers, K., Koh, P.-S., and Stapledon, G. (2006). "The Determinants of CEO Compensation: Rent Extraction or Labour Demand?". *The British Accounting Review*, 38(3), 259-275. doi: 10.1016/j.bar.2006.01.003

Chhaochharia, V., and Grinstein, Y. (2007). "Corporate Governance and Firm Value: The Impact of the 2002 Governance Rules". *The Journal of Finance*, 62(4), 1789-1825. doi: 10.1111/j.1540-6261.2007.01257.x

Chhaochharia, V., and Grinstein, Y. (2009). "CEO Compensation and Board Structure". *The Journal of Finance*, 64(1), 231-261. doi: 10.1111/j.1540-6261.2008.01433.x

Christensen, J., Kent, P., Routledge, J., and Stewart, J. (2012). "Do Corporate Governance Recommendations Assist the Performance and Accountability of Small Listed Companies?". Bond University. Gold Coast.

Christensen, J., Kent, P., and Stewart, J. (2010). "Corporate Governance and Company Performance in Australia". *Australian Accounting Review*, 20(4), 372-386. doi: 10.1111/j.1835-2561.2010.00108.x

Clarkson, P., Van Bueren, A. L., and Walker, J. (2006). "Chief Executive Officer Remuneration Disclosure Quality: Corporate Responses to an Evolving Disclosure Environment". *Accounting & Finance*, 46(5), 771-796. doi:10.111/j.1467-629x.2006.00197.x

Clarkson, P. M., Walker, J., and Nicholls, S. (2011). "Disclosure, Shareholder Oversight and the Pay–Performance Link". *Journal of Contemporary Accounting & Economics*, 7(2), 47-64. doi: 10.1016/j.jcae.2011.07.001

Coates, J. C. (2007). "The Goals and Promise of the Sarbanes-Oxley Act". *The Journal of Economic Perspectives*, 21(1), 91-116.

Coles, J. L., Daniel, N. D., and Naveen, L. (2008). "Boards: Does one size fit all". *Journal of Financial Economics*, 87(2), 329-356. doi:10.1016/j.jfineco.206.08.008.

Conyon, M. J. (1997). "Corporate Governance and Executive Compensation". *International Journal of Industrial Organization*, 15(4), 493-509.

Conyon, M. (2011). "Compensation Committees and CEO Pay". In C. Mallin (Ed.), Handbook on International Corporate Governance: Country Analysis (second edition), Chapter 13. London: Edward Edgar Publishing Limited.

Conyon, M., Gregg, P., and Machin, S. (1995). "Taking Care of Business: Executive Compensation in the United Kingdom". *The Economic Journal*, 105(430), 704-714.

Conyon, M., and He, L. (2004). "Compensation Committees and CEO Compensation Incentives in U.S. Entrepreneurial Firms". *Journal of Management Accounting Research*, 16, 35-56.

Conyon, M. J, and Peck, S. I (1998). "Board Control, Remuneration Committees, and Top Management Compensation". *The Academy of Management Journal*, 41(2), 146-157.

Conyon, M., and Sadler, G. (2010). "Shareholder Voting and Directors' Remuneration Report Legislation: Say on Pay in the UK". *Corporate Governance: An International Review*, 18(4), 296-312. doi: 10.1111/j.1467-8683.2010.00802.x

Conyon, M. J., and Murphy, K. J. (2000). "The Prince and the Pauper? CEO Pay in the United States and United Kingdom". *The Economic Journal*, 110(467), 640-671. doi: 10.1111/1468-0297.00577

Core, J. E., Guay, W. R., and Larcker, D. F. (2003). "Executive Equity Compensation and Incentives: A Survey". FRBNY Economic Policy Review (April), 27-50.

Core, J. E., Guay, W. R., and Thomas, R. S. (2005). "Is U.S. CEO Compensation Inefficient Pay without Performance". Michigan Law Review, 103. 1142 2004-2005.

Core, J. E., Holthausen, R. W., and Larcker, D. F. (1999). "Corporate Governance, Chief Executive Officer Compensation, and Firm Performance". *Journal of Financial Economics*, 51(3), 371-406.

Cotter, J., and Silvester, M. (2003). "Board and Monitoring Committee Independence". *Abacus*, 39(2), 211-232.

Coulton, J., and Taylor, S. (2002a). "Accounting for Executive Stock Options: A Case Study in Avoiding Tough Decisions". *Australian Accounting Review*, 12(26), 3-10. doi: 10.1111/j.1835-2561.2002.tb00190.x

Coulton, J., and Taylor, S. (2002b). "Option Awards for Australian CEOs: The Who, What and Why". *Australian Accounting Review*, 12(26), 25-35. doi: 10.1111/j.1835-2561.2002.tb00192.x

Cui, T. Q., Evans, E., and Wright, S. (2007). Have The Objectives of the ASX Recommendations on Good Corporate Governance Been Achieved?. Retrieved from http://www.baa.group.shef.ac.uk/events/conference/2008/papers/Cui.pdf

Daily, C. M., Johnson, J. L., Ellstrand, A. E., and Dalton, D. R. (1998). "Compensation Committee Composition as a Determinant of CEO Compensation". *The Academy of Management Journal*, 41(2), 209-220.

Dalal, D. K., and Zickar, M. J. (2012). "Some Common Myths About Centering Predictor Variables in Moderated Multiple Regression and Polynomial Regression". *Organizational Research Methods*, 15(3), 339-362. doi: 10.1177/1094428111430540

Dalton, D. R., Daily, C. M., Ellstrand, A. E., and Johnson, J. L. (1998). "Meta-Analytic Reviews of Board Composition, Leadership Structure, and Financial Performance". *Strategic Management Journal*, 19(3), 269-290.

David, P., Kochhar, R., and Levitas, E. (1998). "The Effect of Institutional Investors on the Level and Mix of CEO Compensation". *The Academy of Management Journal*, 41(2), 200-208.

Deane, S. (2007). "Say On Pay: Results From Overseas". *Corporate Board*, 28(165), 11-18.

Dedman, E. (2000). "An Investigation into the Determinants of UK Board Structure Before and After Cadbury". *Corporate Governance An International Review*, 8(2), 133-153.

Dedman, E. (2002). "The Cadbury Committee Recommendations on Corporate Governance - A Review of Compliance and Performance Impacts". *International Journal of Management Reviews*, 4(4), 335 - 352.

Deloitte. (2004). "Report on the Impact of the Directors' Remuneration Report Regulations ".

Demsetz, H., and Lehn, K. (1985). "The Structure of Corporate Ownership: Causes and Consequences". *Journal of Political Economy*, 93(6), 1155-1177.

Department for Business Innovation and Skills. (2012). "Shareholder Voting Rights and Consultation". Report. UK.

Denis, D. J., Denis, D. K., and Sarin, A. (1997). "Agency Problems, Equity Ownership, and Corporate Diversification". *The Journal of Finance*, 52(1), 135-160.

Denis, D. K. (2001). "Twenty-five Years of Corporate Governance Research ... and Counting". *Review of Financial Economics* Retrieved 3, 10, from http://www.sciencedirect.com/science/article/B6W61-44XSHJX-2/2/797790ddcc1769f095aee7e7932735db

Denis, D. K., and McConnell, J. J. (2003). "International Corporate Governance". *The Journal of Financial and Quantitative Analysis*, 38(1), 1-36.

Dew-Becker, I. (2009). "How Much Sunlight Does It Take to Disinfect a Boardroom? A Short History of Executive Pay Regulation in America". *CESifo Economic Studies*, 55(3/4). Working Paper No. 2379.

Dey, A. (2008). "Corporate Governance and Agency Conflicts". *Journal of Accounting Research*, 46(5), 1143-1181. doi:10.1111/j.1475-679x.2008.00301.x

Dignam, A., and Galanis, M. (2004). "Australia Inside-out: The Corporate Governance System of the Australian Listed Market". Melbourne University Law Review, 28(Online), 623.

Donaldson, L., and Davis, J. H. (1991). "Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns". *Australian Journal of Management*, 16(1), 49.

Doukas, J. A., Chansog, K., and Pantzalis, C. (2000). "Security Analysis, Agency Costs and Company Characteristics". *Financial Analysts Journal* 56(6), 54-63.

Edmans, A., and Gabaix, X. (2009). "Is CEO Pay Really Inefficient? A Survey of New Optimal Contracting Theories". *European Financial Management*, 15(3), 486-496. doi: 10.1111/j.1468-036X.2009.00500.x

Egginton, D., Forker, J., and Grout, P. (1993). "Executive and Employee Share Options: Taxation, Dilution and Disclosure". *Accounting & Business Research*, 23(91A), 363-372.

Eisenhardt, K. M. (1989). "Agency Theory: An Assessment and Review". *The Academy of Management Review*, 14(1), 57-74.

Evans, R., and Evans, J. (2001). "The Influence of Non-Executive Director Control and Rewards on CEO Remuneration: Australian Evidence ". Draft Research Article. Curtin University of Technology. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=263050

Fama, E. F. (1980). "Agency Problems and the Theory of the Firm". *The Journal of Political Economy*, 88(2), 288-307.

Fama, E. F., and Jensen, M. C. (1983). "Separation of Ownership and Control". *Journal of Law and Economics*, 26(2), 301-325.

Farrar, J. (2001). "Corporate Govenance in Australia and New Zealand". South Melbourne, Australia: Oxford University Press.

Ferri, F., and Maber, D. (2009). "Say on Pay and CEO Compensation: Evidence from the UK". SSRN Working Paper.

Financial Accounting Standards Board (2004). Statement of Financial Accounting Standards No 123R "Share-Based Payment".

Finegold, D., Benson, G. S., and Hecht, D. (2007). "Corporate Boards and Company Performance: review of research in light of recent reforms". *Corporate Governance: An International Review*, 15(5), 865-878. doi: 10.1111/j.1467-8683.2007.00602.x

Florackis, C. (2008). "Agency Costs and Corporate Governance Mechanisms: Evidence for UK Firms". *International Journal of Managerial Finance*, 4(1), pp.37 - 59. doi: 10.1108/17439130810837375.

Frankel, R., Kothari, S. P., and Weber, J. (2006). "Determinants of the Informativeness of Analyst Research". *Journal of Accounting and Economics*, 41(1–2), 29-54. doi: 10.1016/j.jacceco.2005.10.004

Frydman, C., and Jenter, D. (2010). "CEO Compensation". *Annual Review of Financial Economics*, 2(1), 75-102. doi: 10.1146/annurev-financial-120209-133958

Frydman, C., and Saks, R. E. (2010). "Executive Compensation: A New View from a Long-Term Perspective, 1936-2005". *The Review of Financial Studies*, 23(12), 2099 - 2138. doi: 10.1093/rfs/hhp120.

Gaver, J., and Gaver, K. (1995). "Compensation Policy and the Investment Opportunity Set". *Journal of Financial Management*, 24(1), 19 - 32.

Geiler, P., and Renneboog, L. (2011). "Managerial Compensation: Agency Solution or Problem?". *Journal of Corporate Law Studies*, 11(1), 99-138.

Gillan, S. L. (2006). "Recent Developments in Corporate Governance: An Overview". *Journal of Corporate Finance*, 12(3), 381-402. doi:10.1016/j.jcorpfin.2005.11.002.

Girma, S., Thompson, S., and Wright, P. W. (2007). "Corporate Governance Reforms and Executive Compensation Determination: Evidence from the UK*". *The Manchester School*, 75(1), 65-81. doi: 10.1111/j.1467-9957.2007.01003.x

Gomez-Mejia, L. R., Tosi, H., and Hinkin, T. (1987). "Managerial Control, Performance, and Executive Compensation". *The Academy of Management Journal*, 30(1), 51-70.

Gompers, P., Ishii, J., and Metrick, A. (2003). "Corporate Governance and Equity Prices". *The Quarterly Journal of Economics*, 118(1), 107-155.

Gregory-Smith, I. (2009). "Chief Executive Pay and Non-executive Director Pay in the UK: Optimal Contracting vs Rent Extraction ". NUBS Research Paper Series No 2009-02. Research Paper Nottingham University Business School Nottingham. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1345926

Guest, P. M. (2008). "The Determinants of Board Size and Composition: Evidence from the UK". *Journal of Corporate Finance*, 14(1), 51-72.

Guest, P. M. (2010). "Board Structure and Executive Pay: Evidence from the UK". *Cambridge Journal of Economics*, 34(6), 1075-1096. doi: 10.1093/cje/bep031

Hair, Jrn. J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). "Multivariate Data Analysis, A Global Perspective" (7th ed.). New York: Pearson.

Hall, B. J., and Liebman, J. B. (1998). "Are CEOS Really Paid Like Bureaucrats?". *The Quarterly Journal of Economics*, 113(3), 653-691.

Hall, B. J., and Murphy, K. J. (2003). "The Trouble with Stock Options". *Journal of Economic Perspectives*, 17(3), 49-70.

Hartzell, J. C., and Starks, L. T. (2003). "Institutional Investors and Executive Compensation". *The Journal of Finance*, 58(6), 2351-2374.

Heaney, R., Tawani, V., and Goodwin, J. (2010). "Australian CEO Remuneration*". Economic Papers: *Journal of Applied Economics and Policy*, 29(2), 109-127. doi: 10.1111/j.1759-3441.2010.00060.x

Hemphill, T. A., and Lillevik, W. (2009). "US “Say-on-Pay” Legislation: Is it Corporate Governance Overreach?". *International Journal of Law and Management*, 51(2), 105 - 122. doi: 10.1108/17542430910947121

Henry, D. (2008). "Corporate Governance Structure and the Valuation of Australian Firms: Is There Value in Ticking the Boxes?". *Journal of Business Finance & Accounting*, 35(7/8), 912-942. doi: 10.1111/j.1468-5957.2008.02100.x.

Hentschel, L., and Kothari, S. P. (2001). "Are Corporations Reducing or Taking Risks with Derivatives?". *The Journal of Financial and Quantitative Analysis*, 36(1), 93-118.

Hermalin, B. E., and Weisbach, M. S. (1988). "The Determinants of Board Composition". *The RAND Journal of Economics*, 19(4), 589-606.

Higgs, D. (2003). "Review of the Role and Effectiveness of Non-executive Directors". Report. UK Department of Trade and Industry. London.

Hill, J. (2010). "New Trends in the Regulation of Executive Remuneration". European Corporate Governance Institute Law Working Paper (142/2010).

Hill, J., and Yablon, C. (2002). "Corporate Governance and Executive Remuneration: Rediscovering Managerial Positional Conflict". University of New South Wales Law Journal, 25(2).

Himmelberg, C. P., Hubbard, R. G., and Palia, D. (1999). "Understanding the Determinants of Managerial Ownership and the Link between Ownership and Performance". *Journal of Financial Economics*, 53(3), 353-384. doi: 10.1016/s0304-405x(99)00025-2

Holmstrom, B. a., and Kaplan, S. N. (2003). "The State of U.S. Corporate Governance: What's Right and What's Wrong?". *Journal of Applied Corporate Finance*, 15(3), 8-20. doi: 10.1111/j.1745-6622.2003.tb00457.x

Huang, H., Lobo, G. J., and Zhou, J. (2009). "Determinants and Accounting Consequences of Forming a Governance Committee: Evidence from the United

States". *Corporate Governance: An International Review*, 17(6), 710-727. doi: 10.1111/j.1467-8683.2009.00769.x

Hughes, J. P., Lang, W. W., Mester, L. J., Moon, C.-G., and Pagano, M. S. (2003). "Do Bankers Sacrifice Value to Build Empires? Managerial Incentives, Industry Consolidation, and Financial Performance". *Journal of Banking & Finance*, 27(3), 417-447. doi: 10.1016/s0378-4266(02)00385-0

Jensen, M. C. (1986). "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers". *The American Economic Review*, 76(2), 323-329.

Jensen, M. C. (1993). "Presidential Address. The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems". *The Journal of Finance*, 48(3), 831-880.

Jensen, M. C., and Meckling, W. H. (1976). "Theory of the Firm: Managerial behavior, agency costs and ownership structure". *Journal of Financial Economics*, 3(4), 305-360.

Jensen, M. C., and Murphy, K. J. (1990). "Performance Pay and Top-Management Incentives". *The Journal of Political Economy*, 98(2), 225-264.

Jenson, D., Weitz, M., Cotter, A., Jensen, T., Mark, E., Radloff, J., and Quinlivan, S. (2010). "Summary of Corporate Governance Provision in the Dodd-Frank Act". Retrieved from http://dodd-frank.com/summary-of-corporate-governance-provisions-in-the-dodd-frank-act/

Johnston, J. (2007). "Independent Directors, Executive Remuneration and the Governance of the Corporation: Some Empirical Evidence from the United Kingdom". *Review of Applied Economics*, 3(1-2), 105-122.

Jones, I., and Pollitt, M. (2004). "Understanding How Issues in Corporate Governance Develop: Cadbury Report to Higgs Review". *Corporate Governance: An International Review*, 12(2), 162-171. doi: 10.1111/j.1467-8683.2004.00355.x

Kang, H., Cheng, M., and Gray, S. J. (2007). "Corporate Governance and Board Composition: diversity and independence of Australian boards". *Corporate Governance: An International Review*, 15(2), 194-207. doi: 10.1111/j.1467-8683.2007.00554.x

Kent, P., Routledge, J., and Stewart, J. (2010). "Choice of Governance Structure and Earnings Quality: Evidence from Australian Companies". Bond University; Griffith University.

Kesner, I. F. (1988). "Directors' Characteristics and Committee Membership: An Investigation of Type, Occupation, Tenure, and Gender". *The Academy of Management Journal*, 31(1), 66-84.

Kiel, G. C., and Nicholson, G. J. (2003). "Board Composition and Corporate Performance: How The Australian Experience Informs Contrasting Theories of Corporate Governance ". *Corporate Governance: An International Review*, 11(3), 189-205.

Klein, A. (2002). "Economic Determinants of Audit Committee Independence". *The Accounting Review*, 77(2), 435-452.

Klein, A. (2003). "Likely Effects of Stock Exchange Governance Proposals and Sarbanes-Oxley on Corporate Boards and Financial Reporting". *Accounting Horizons*, 17(4), 343-355.

Krishnan, J., and Zhongxia, S. Y. (2005). "Why Some Companies Seek Shareholder Ratification on Auditor Selection". *Accounting Horizons*, 19(4), 237-254.

Larcker, D. F., Richardson, S. A., and Tuna, I. (2007). "Corporate Governance, Accounting Outcomes, and Organizational Performance". *The Accounting Review*, 82(4), 963-1008. doi: 10.2308/accr.2007.82.4.963

Lawrence, J., & , and Stapledon, G. (1999). "Do Independent Directors Add Value". (pp. 61). Melbourne: University of Melbourne, Faculty of Law.

Lee, J. (2009). "Executive Performance-Based Remuneration, Performance Change and Board Structures". *The International Journal of Accounting*, 44(2), 138-162. doi:10.1016/j.intacc.2009.03.002.

Lehn, K. M., Patro, S., and Zhao, M. (2009). "Determinants of the Size and Composition of US Corporate Boards: 1935-2000". *Financial Management*, 38(4), 747-780.

Leone, A. J., Wu, J. S., and Zimmerman, J. L. (2006). "Asymmetric Sensitivity of CEO Cash Compensation to Stock Returns". *Journal of Accounting and Economics*, 42(1–2), 167-192. doi: 10.1016/j.jacceco.2006.04.001

Lin, J and Liu, M. (2009) "The Impact of corporate governance on auditor choice: Evidence from China". *Journal of International Accounting, Auditing and Taxation*, 18(1), 44-59.

Linck, J. S., Netter, J. M., and Yang, T. (2008). "The Determinants of Board Structure". *Journal of Financial Economics*, 87(2), 308-328. doi: 10.1016/j.jfineco.2007.03.004.

Lorsch, J. W., and MacIver, E. (1989). "Pawns or Potentates: The Reality of America's Corporate Boards". Boston: Harvard Business School Press.

Main, B. G. M., Jackson, C., Pymm, J., and Wright, V. (2008). "The Remuneration Committee and Strategic Human Resource Management". *Corporate Governance: An International Review*, 16(3), 225-238. doi: 10.1111/j.1467-8683.2008.00682.x

Main, B. G. M., and Johnston, J. (1993). "Remuneration Committees and Corporate Governance". *Accounting & Business Research*, 23(91A), 351-362.

Matolcsy, Z., and Wright, A. (2007). "Australian CEO Compensation: The Descriptive Evidence". *Australian Accounting Review*, 17(43), 47-59. doi: 10.1111/j.1835-2561.2007.tb00335.x

Matolcsy, Z., and Wright, A. (2011). "CEO Compensation Structure and Firm Performance". *Accounting and Finance*, 51(3), 745–763. doi:10.111/j.1467-629X.2010.00363.x.

Matsumura, E., and Shin, J. (2005). "Corporate Governance Reform and CEO Compensation: Intended and Unintended Consequences". *Journal of Business Ethics*, 62(2), 101-113. doi: 10.1007/s10551-005-0175-7

McKnight, P. J., and Weir, C. (2009). "Agency Costs, Corporate Governance Mechanisms and Ownership Structure in Large UK Publicly Quoted Companies: A Panel Data Analysis". *The Quarterly Review of Economics and Finance*, 49(2), 139-158. doi:10.1016/j.qref.2007.09.008.

Mehran, H. (1995). "Executive Compensation Structure, Ownership, and Firm Performance". *Journal of Financial Economics*, 38(2), 163-184.

Merhebi, R., Pattenden, K., Swan, P. L., and Zhou, X. (2006). "Australian Chief Executive Officer Remuneration: Pay and Performance". *Accounting & Finance*, 46(3), 481-497. doi: 10.1111/j.1467-629X.2006.00178.x

Murphy, K. J., Ashenfelter, C., and Card, D. (1999). Chapter 38 "Executive Compensation" Handbook of Labor Economics (Volume 3, Part 2, pp. 2485-2563): Elsevier.

Newman, H. A. (2000). "The Impact of Ownership Structure on the Structure of Compensation Committees". *Journal of Business Finance & Accounting*, 27(5-6), 653-678. doi: 10.1111/1468-5957.00329

Newman, H. A., and Mozes, H. A. (1999). "Does the Composition of the Compensation Committee Influence CEO Compensation Practices?". *Financial Management*, 28(3), 41-53.

Newman, H. A., and Wright, D. W. (1995). "Compensation Committee Composition and Its Influence on CEO Compensation Practices". SSRN Working Paper. Retrieved from http://ssrn.com/abstract=7163

Ozkan, N. (2007). "Do Corporate Governance Mechanisms Influence CEO Compensation? An Empirical Investigation of UK Companies". *Journal of Multinational Financial Management*, 17(5), 349-364. doi: 10.1016/j.mulfin.2006.08.002

Palia, D. (2001). "The Endogeneity of Managerial Compensation in Firm Valuation: A Solution". *Review of Financial Studies*, 14(3), 735-764. doi: 10.1093/rfs/14.3.735

Pallant, J. (2007). "SPSS Survival Manual" (3rd ed.). Sydney: Allen & Unwin.

Rainsbury, E. A., Bradbury, M. E., and Steven, F. C. (2008). "Firm Characteristics and Audit Committees Complying with 'Best Practice' Membership Guidelines". *Accounting & Business Research*, 38(5), 393-408.

Rankin, M. (2010). "Structure and Level of Remuneration Across the Top Executive Team". *Australian Accounting Review*, 20(3), 241-255. doi: 10.1111/j.1835-2561.2010.00097.x

Ryan, H. E., and Wiggins, R. A. (2001). "The Influence of Firm- and Manager-Specific Characteristics on the Structure of Executive Compensation". *Journal of Corporate Finance*, 7(2), 101-123. doi:10.1016/S0929-1199(00)00021-3.

Ryan, H. E., and Wiggins, R. A. (2004). "Who is in Whose Pocket? Director Compensation, Board Independence, and Barriers to Effective Monitoring". *Journal of Financial Economics*, 73(3), 497-524. doi: 10.1016/j.jfineco.2003.11.002.

Sapp, S. G. (2008). "The Impact of Corporate Governance on Executive Compensation". *European Financial Management*, 14(4), 710-746. doi: 10.1111/j.1468-036X.2008.00443.x

Sheehan, K. (2009). "The Regulatory Framework for Executive Remuneration in Australia". Sydney Law Review, 31(273), online.

Sheehan, K. (2010). "Say on Pay and the Outrage Constraint". SSRN Working Paper. Abstract = 1679622.

Shleifer, A., and Vishny, R. W. (1997). "A Survey of Corporate Governance". *The Journal of Finance*, 52(2), 737-783.

Singh, M., and Davidson, W. N. (2003). "Agency Costs, Ownership Structure and Corporate Governance Mechanisms". *Journal of Banking & Finance*, 27(5), 793-816. doi:10.1016/S0378-4266(01)00260-6.

Singh, R. (2006). "Board Independence and the Design of Executive Compensation ". EFA 2005 Moscow Meeting Paper; Harvard NOM Working Paper No 673741. Working Paper. Harvard. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=673741

Smith Jr, C. W., and Watts, R. L. (1992). "The Investment Opportunity Set and Corporate Financing, Dividend, and Compensation Policies". *Journal of Financial Economics*, 32(3), 263-292. doi: 10.1016/0304-405x(92)90029-w

Spira, L. F., and , and Bender, R. (2004). "Compare and Contrast: Perspectives on Board Committees". *Corporate Governance: An International Review*, 12(4), 489 - 499. doi: 10.1111/j.1467-8683.2004.00389

Sun, J., and Cahan, S. (2009). "The Effect of Compensation Committee Quality on the Association between CEO Cash Compensation and Accounting Performance". *Corporate Governance: An International Review*, 17(2), 193-207. doi:10.111/j.1467-8683.2008.00726.x

Sun, J., and Cahan, S. (2012). "The Economic Determinants of Compensation Committee Quality". *Managerial Finance*, 38(2), 188-205. doi: 10.1108/03074351211193721

Sun, J., Cahan, S. F., and Emanuel, D. (2009). "Compensation Committee Governance Quality, Chief Executive Officer Stock Option Grants, and Future Firm Performance". *Journal of Banking & Finance*, 33(8), 1507-1519. doi:10.1016/j.jbankfin.2009.02.015.

Tabachnick, B. G., and Fidell, L. S. (2001). "Using Multivariate Statistics (4th Ed)". Boston: Allyn and Bacon.

The Committee on the Financial Aspects of Corporate Governance. (1992). "The Financial Aspects of Corporate Governance". Report. London.

The Study Group on Directors' Remuneration. (1995). "Directors' Remuneration" - A Report by a Study Group Chaired by Sir Richard Greenbury. London.

Thomas, R. (2011). "Lessons from the Rapid Evolution of Remuneration Practices in Australia: Hard Law, Soft Law and Consultants". Vanderbilt Public Law Research Paper 11 - 13.

Tian, G. Y., and Twite, G. (2010). "Corporate Governance and the CEO Pay-Performance Link: Some Australian Evidence". ssrn working paper.

Tosi, H. L., Werner, S., Katz, J. P., and Gomez-Mejia, L. R. (2000). "How Much Does Performance Matter? A Meta-Analysis of CEO Pay Studies". *Journal of Management*, 26(2), 301-339. doi: 10.1177/014920630002600207

UK Finanical Reporting Council. (2010). "UK Corporate Governance Code". London:

UK Financial Reporting Council. (2012) FRS 20 "Share Based Payments" . London

Vafeas, N. (1999). "The Nature of Board Nominating Committees and Their Role in Corporate Governance". *Journal of Business Finance & Accounting*, 26(1-2), 199-225.

Vafeas, N. (2000). "The Determinants of Compensation Committee Membership". *Corporate Governance An International Review*, 8(4), 356-366.

Vafeas, N. (2003). "Further Evidence on Compensation Committee Composition as a Determinant of CEO Compensation". *Financial Management* , 32(2), 53 -70.

Van Essen, M., Otten, J., and Carberry, E. J. (2012). "Assessing Managerial Power Theory: A Meta-Analytic Approach to Understanding the Determinants of CEO Compensation". *Journal of Management*. doi: 10.1177/0149206311429378

Ward, A. J., Brown, J. A., and Rodriguez, D. (2009). "Governance Bundles, Firm Performance, and the Substitutability and Complementarity of Governance

Mechanisms". *Corporate Governance: An International Review*, 17(5), 646-660. doi: 10.1111/j.1467-8683.2009.00766.x

Watts, R. L., and Zimmerman, J. L. (1990). "Positive Accounting Theory: A Ten Year Perspective". *The Accounting Review*, 65(1), 131-156.

Weir, C., and Laing, D. (2001). "Governance Structures, Director Independence and Corporate Performance in the UK". *European Business Review*, 13(2), 86-95. doi: 10.1108/09555340110385254

Weisbach, M. S. (2007). "Review: Optimal Executive Compensation versus Managerial Power: A Review of Lucian Bebchuk and Jesse Fried's "Pay without Performance: The Unfulfilled Promise of Executive Compensation"". *Journal of Economic Literature*, 45(2), 419-428.

Windsor, C. A., and Cybinski, P. J. (2009). "Size Matters: The Link between CEO Remuneration, Firm Size and Firm Performance Moderated by Remuneration Committee Independence". Griffith University Business School Discussion Paper Economics, (No. 2009-05). Retrieved from http://www.griffith.edu.au/__data/assets/pdf_file/0010/196759/2009-05-size-matters-the-link-between-ceo-remuneration-firm-size-and-performance-moderated-by-remuneration-committee-independence.pdf

Appendix 1: Sample Companies as at 30 June 2008

Code	Company Name	Code	Company Name
AAF	Austral Africa Resources Limited	ADX	Audax Resources Limited
AAG	Aragon Resources Limited	ADY	Admiralty Resources NL
AAL	APAC Coal Limited	AEA	Altera Resources Ltd
AAM	A1 Minerals Limited	AEC	Ammtec Limited
AAO	Australasia Gold Limited	AED	AED Oil Limited
AAQ	Australis Aquaculture Limited	AEE	Aura Energy Limited
AAR	Anglo Australian Resources NL	AEF	Australian Ethical
AAT	Autron Corporation Limited	AEI	Aeris Environmental Limited
AAU	Adcorp Australia Limited	AEM	Artist & Entertainment Group Ltd
ABI	Ambri Limited	AEO	Austereo Group Ltd
ABP	Abacus Property Group Holdings Limited	AEP	Allco Equity Partners Limited
ABQ	Allied Brands Limited	AES	Advanced Energy Systems Limited
ABU	ABM Resources NL	AET	Ausmelt Limited
ABV	ADV Braking Technology Limited	AEX	Acclaim Exploration NL
ABY	Aditya Birla Mineral Limited	AFA	ASF Group Limited
ACB	A-Cap Resources Limited	AFI	Australian Foundation Investment Company Limited
ACE	Advanced Engine Components Limited	AFR	African Energy Resource Limited
ACG	AtCor Medical Holdings Limited	AGD	Austral Gold Limited
ACK	Austock Group Limited	AGI	Ainsworth Game Technology Limited
ACL	Alchemia Limited	AGK	AGL Energy Limited
ACR	Acrux Limited	AGO	Atlas Iron Limited
ACS	Accent Resources NL	AGQ	Australian Motor Finance Group Ltd
ACU	Avantogen Limited	AGS	Alliance Resources Limited
ACW	Actinogen Limited	AGU	Aurium Resources Limited
ACZ	Atticus Resource Limited	AGV	Aust Gold Invest Ltd
ADA	Adacel Technologies Limited	AGX	Agenix Limited
ADD	Adavale Resource Limited	AHC	AHC Limited
ADE	Adelaide Energy Limited	AHD	Amalgamated Holdings Limited
ADG	Adtrans Group Limited	AHE	Automotive Holdings Limited
ADI	Adelphi Energy Limited	AHI	Allco Hit Limited
ADN	Adelaide Resources	AHN	Athena Resources Limited
ADO	BioLayer Corporation Limited	AHR	Anchor Resources Limited
ADQ	ADG Global Supply Limited	AHS	Atlas Group Holdings Limited

Code	Company Name	Code	Company Name
ADU	Adamus Resources Limited	AIE	Autodom Limited
AIG	Aircruising Australia Limited	AOC	Australian Oil Company Limited
AII	Abra Mining Limited	AOE	Arrow Energy
AIM	AIM Resources Limited	AOK	Austex Oil Limited
AIO	Asciano Limited	AON	Apollo Minerals Ltd
AIV	Activex Limited	AOP	Apollo Life Sciences Limited
AIY	Authorised Investment Fund Limited	APB	Arafura Pearls Holdings Ltd
AJL	AJ Lucas Group Limited	APD	APN Property Group Limited
AKF	Impact Capital Ltd	APG	Austpac Resources NL
AKK	Austin Exploration Limited	APH	Ascent Pharmahealth Limited
ALB	Albidon Limited	APK	Australian Power & Gas Company Ltd
ALF	Australian Leaders	APM	Australian Institute of Property Mgmt
ALG	Alarma Resources Limited	APP	APA Financial Services Ltd
ALR	Aberdeen Leaders Limited	AQA	Aquila Resources Ltd
ALT	Analytica Limited	AQD	Ausquest Limited
ALU	Altium Limited	AQE	Aequs Capital Ltd
ALX	Allstate Explorations NL	AQL	Aquacarotene Limited
ALY	Alchemy Resource Ltd	AQR	Aussie Q Resources Limited
AMA	Allomak Limited	ARA	Ariadne Australia Limited
AMC	Amcor Limited	ARD	Argent Minerals Limited
AMH	Amcil Limited	ARE	Argonaut Resources NL
AMM	Amcom Telecommunication Ltd	ARG	Argo Investments Limited
AMO	Ambertech Limited	ARH	Australasian Resources Limited
AMT	Advanced Surgical Design & Manft Ltd	ARJ	The Ark Fund Limited
AMU	Amadeus Energy Ltd	ARM	Aurora Minerals Limited
AMX	Ampella Mining Ltd	ARO	Astro Diamond Mines NL
AND	Andean Resources Ltd	ARP	ARB Corporation Limited
ANG	Austin Engineering Ltd	ARU	Arafura Resource Ltd
ANH	Ansearch Limited	ARV	Artemis Resources Ltd
ANM	Advanced Magnesium Limited	ARW	Australian Renewable Fuel Ltd
ANN	Ansell Limited	ASB	Austal Limited
ANO	Advanced Nanotechnology Ltd	ASC	Adultshop.Com Ltd
ANP	Antisense Therapeutic Limited	ASL	Ausdrill Limited
ANQ	Anaeco Limited	ASP	Aspermont Limited.
ANU	Aconcagua Resources Ltd	ASU	Alpha Technologies Corporation Ltd
ANX	Anadis Limited	ASV	Argus Solutions Ltd

Code	Company Name	Code	Company Name
ASW	Advanced Share Ltd	AXM	Apex Minerals NL
ASX	ASX Limited	AXO	Aurox Resources Ltd
ASZ	ASG Group Limited	AXT	Argo Exploration Ltd
ATG	Austin Group Limited	AXY	Atom Energy Limited
ATI	Atlantic Limited	AXZ	Amex Resources Ltd
ATJ	Automotive Technology Group Ltd	AYR	Alloy Resources Ltd
ATN	Ashburton Minerals	AYX	Austofix Group Ltd
ATQ	Atomic Resources Ltd	AZC	Australian Zircon NL
ATR	Astron Limited	AZD	Amazing Loans Ltd
ATW	Atos Wellness Ltd	AZM	Azumah Resources Ltd
AUB	Austbrokers Holdings Ltd	AZS	Azure Minerals Ltd
AUF	Asian Masters Fund Ltd	AZX	Auzex Resources Ltd
AUI	Australian United Investment Company Ltd	BAR	Barra Resources Ltd
AUJ	Augustus Minerals Ltd	BAS	Bass Strait Oil Company Ltd
AUK	Augur Resources Ltd	BAU	Bauxite Resource Ltd
AUQ	Alara Resources Limited	BBC	Babcock & Brown Communities Ltd
AUT	Aurora Oil & Gas Ltd	BBG	Billabong Int3ernational Ltd
AUW	Australian Wealth Management Ltd	BBI	Babcock & Brown Infrastructure Ltd
AUZ	Australian Mines Ltd	BBW	Babcock & Brown Wind Partners Ltd
AVA	Aviva Corporation Ltd	BBX	BBX Holdings Ltd
AVB	Avanco Resources Ltd	BCC	Buccaneer Energy Ltd
AVE	Aevum Limited	BCD	Beaconsfield Gold NL
AVG	Aust Vintage Ltd	BCI	BC Iron Limited
AVH	Avita Medical Ltd	BCM	Babcock & Brown Capital Ltd
AVI	Avalon Minerals Ltd	BCN	Beacon Minerals Ltd
AVJ	Avjennings Limited	BDG	Bendigo Mining Ltd
AVO	Avoca Resources Ltd	BDI	Blina Diamonds NL
AVS	Avastra Sleep Centre Ltd	BDL	Brandrill Limited
AVX	Avexa Limited	BDM	Biodiem Limited
AVZ	Avonlea Minerals Limited	BDR	Beadell Resource Ltd
AWE	Australian Worldwide Exploration	BEL	Bentley Internat Ltd
AWL	Australian Wine Holdings Ltd	BER	Berklee Limited
AXC	AXG Mining Ltd	BET	Belmont Holdings Ltd
AXE	Archer Exploration Ltd	BFE	Black Fire Energy Ltd
AXI	Axiom Properties	BGD	Boulder Steel Ltd

Code	Company Name	Code	Company Name
BGL	Bigair Group Limited	BPK	Bremer Park Limited
BIT	Biotron Limited	BPO	Bioprospect Limited
BKG	Buka Gold Limited	BPT	Beach Petroleum Ltd
BKI	Brickworks Investment Company Ltd	BQT	BQT Solutions Ltd
BKL	Blackmores Limited	BRC	Brain Resource Ltd
BKM	BKM Management Ltd	BRM	Brockman Resources Ltd
BKN	Bradken Limited	BRO	Broad Investments Ltd
BKP	Baraka Petroleum Ltd	BRT	Brainytoys Limited
BKR	Becker Group Limited	BRW	Breakaway Resources
BKW	Brickworks Limited	BSA	BSA Limited
BKY	Berkeley Resources Ltd	BSI	Beyond Sportswear International Ltd
BLD	Boral Limited.	BSL	Bluescope Steel Ltd
BLK	Blackham Resources Ltd	BSM	Bass Metals Ltd
BLR	Black Range Minerals Ltd	BSN	Bisan Limited
BLT	Benitec Limited	BSR	Bassari Resources
BLU	Bluefreeway Limited	BTA	Biota Holdings Ltd
BLZ	Blaze International Ltd	BTC	Biotech Capital Ltd
BMI	Bmdi Tuta Limited	BTU	Bathurst Resources Ltd
BML	Botswana Metals Ltd	BTV	Batavia Mining Ltd
BMM	Bellamel Mining Ltd	BUL	Blue Energy Limited
BMY	Brumby Resources	BUR	Burleson Energy Ltd
BNE	Bone Medical Limited	BUX	Buxton Resources Ltd
BNL	Balkans Gold Limited	BUY	Bounty Oil & Gas NL
BNO	Bionomics Limited	BVA	Bravura Solutions Ltd
BNT	Bounty Industries Ltd	BWN	Bowen Energy Limited
BNV	Brand New Vintage Ltd	BXB	Brambles Limited
BOD	Biomd Limited	BYI	Beyond International Ltd
BOE	Boss Energy Limited	BYL	Brierty Limited
BOL	Boom Logistics Ltd	BYR	Burey Gold Limited
BOM	Bondi Mining Limited	CAB	Cabcharge Australia Ltd
BON	Bonaparte Diamond Mineral NL	CAF	Centrepoint Alliance
BOS	Biosignal Limited	CAJ	Capitol Health Ltd
BOW	BOW Energy Limited	CAM	Clime Capital Ltd
BPG	Byte Power Group Ltd	CAP	Carpentaria Exp. Ltd
BPH	Biopharmica Limited	CAQ	Cell Aquaculture Ltd

Code	Company Name	Code	Company Name
CAS	Crusader Resource Ltd	CHF	Charter Pacific Corp. Ltd
CAU	Colltech Australia Ltd	CHM	Chameleon Mining NL
CAV	Carnavale Resources Ltd	CHN	Chalice Gold Mines Ltd
CAZ	Cazaly Resources Ltd	CHO	Choiseul Investments Ltd
CBB	Cordlife Limited	CHQ	Costaexchange Ltd
CBD	CBD Energy Limited	CHR	Chalmers Limited
CBH	CBH Resources Ltd	CHZ	Chesser Resources Ltd
CCF	Carbon Conscious Ltd	CIG	Caspian Oil & Gas Ltd
CCI	Chrome Corporation Ltd	CII	CI Resources Limited
CCK	CCK Financial Solution Ltd	CIL	Centrebet Internat. Ltd
CCP	Credit Corp Group	CIN	Carlton Investments Ltd
CCQ	Contango Capital Partner Ltd	CIR	Circadian Tech. Ltd
CCU	Cobar Consolidated Resource Ltd	CIW	Clime Investment Management Ltd
CCV	Cash Converters International Ltd	CIY	City Pacific Limited
CCY	China Century Capital Ltd	CKK	Coretrack Limited
CDA	Codan Limited	CKL	Colorpak Limited
CDD	Cardno Limited	CKP	Cheviot Kirribilly Vineyard Prop. Group
CDM	Cadence Capital Ltd	CKR	Cockatoo Ridge Wines Ltd
CDS	Comdek Limited	CLD	Costarella Design Ltd
CDT	Castle Minerals Ltd	CLH	Collection House Ltd
CDU	Cudeco Limited	CLK	Cypress Lakes Group Ltd
CEC	Coneco Limited	CLN	Colonial Resources Ltd
CEG	CEC Group Limited	CLO	Clough Limited
CEO	C @ Limited	CLQ	Clean Teq Hldgs Ltd
CES	Coal Fe Resources Ltd	CLT	Cellnet Group Ltd
CEY	Centennial Coal Company Ltd	CLU	Cloncurry Metals Ltd
CFE	Cape Lambert Iron Ore Ltd	CLV	Clover Corporation Ltd
CFU	Ceramic Fuel Cells Ltd	CLX	CTI Logistics Ltd
CGF	Challenger F.S.G.Ltd	CMG	Chandler Macleod Ltd
CGG	Citadel Resource Grp	CMI	CMI Limited.
CGI	Consolidated Global Investment Ltd	CMJ	Consolidated Media Holdings
CGM	Cougar Metals NL	CMO	Comtel Corp Limited
CGO	CPT Global Limited	CMP	Compumedics Limited
CGS	Cogstate Ltd	CMS	CommSecure Limited
CHC	Charter Hall Group	CMV	CMA Corporation Ltd

Code	Company Name	Code	Company Name
CMW	Cromwell Group	CRS	Croesus Mining NL
CMY	Capital Mining Ltd	CSD	Consolidated Tin Mines Ltd
CND	Clarius Group Ltd	CSE	Copper Strike Ltd
CNF	Continental Capital Ltd	CSL	CSL Limited
CNH	China Steel Australia Ltd	CSS	Clean Seas Tuna Ltd
CNK	Condor Nickel Ltd	CST	Cellestis Limited
CNM	Carnegie Corporation Ltd	CSV	CSG Limited
CNN	Cardia Technologies Ltd	CTE	Cryosite Limited
CNP	Centro Properties Group	CTN	Contango Microcap Ltd
CNT	Centamin Egypt Ltd	CTO	Citigold Corp Ltd
COE	Cooper Energy Ltd	CTP	Central Petroleum Ltd
COF	Coffey International Ltd	CTS	Contact Uranium Ltd
COH	Cochlear Limited	CTY	Country Road Limited
COI	Comet Ridge Limited	CUE	CUE Energy Resource Ltd
COK	Cockatoo Coal Ltd	CUL	Cullen Resources Ltd
COO	Corum Group Limited	CUO	Copperco Limited
COS	Cool Or Cosy Limited	CUR	Centaurus Resources Ltd
COU	Count Financial Ltd	CUS	Customers Limited
COY	Coppermoly Limited	CUV	Clinuvel Pharmaceut. Ltd
COZ	CO2 Group Limited	CUY	Curnamona Energy Ltd
CPI	CPI Group Limited	CVA	Clever Communications Australia Ltd
CPK	CP1 Limited	CVB	Cheviot Bridge Ltd
CPN	Carpathian Resources Ltd	CVC	CVC Limited
CPR	Clive Peeters Ltd	CVG	Convergent Minerals Ltd
CPS	Computronics Holdings Ltd	CVN	Carnarvon Petroleum Ltd
CPT	Capital Intelligence Ltd	CVR	Central Asia Resouces Ltd
CPU	Computershare Ltd	CVS	Cervantes Corp Ltd
CQT	Conquest Mining Ltd	CWG	Central West Gold NL
CQU	Commquest Ltd	CWK	Coalworks Limited
CRC	Cortona Resources Ltd	CWN	Crown Limited
CRE	Crescent Gold Ltd	CWP	Cedar Woods Prop.
CRG	Crane Group Limited	CXD	Cathrx Ltd
CRJ	Copper Range Limited	CXG	Coote Industrial Ltd
CRK	Carrick Gold Limited	CXM	Centrex Metals
CRL	Comet Resources Ltd	CXN	Connxion Limited

Code	Company Name	Code	Company Name
CXS	Chemgenex Pharmaceut	DSF	Deep Sea Fisheries
CXY	Cougar Energy	DSN	Desert Energy
CYA	Century Australia	DTL	Data#3 Limited
CYG	Coventry Group	DTM	Dart Mining NL
CYL	Catalyst Metals	DUI	Diversified United
CYS	Chrysalis Resources	DUL	Dulhunty Power Ltd
CYT	Cytopia Limited	DVN	Devine Limited
CYU	China Yunnan Copper	DWS	DWS Advanced
CZA	Coal Of Africa Ltd	DWY	Dwyka Resources Ltd
CZP	Computercorp Limited	DYE	Dyesol Limited
CZR	Coziron Resources	DYL	Deep Yellow Limited
DDD	3D Resources Limited	EAL	E & A Limited
DDT	Datadot Technology	EAR	Echo Resources
DEG	DE Grey Mining	EBG	Eumundi Group Ltd
DES	Destra Corporation	EBR	Eagle Bay Resources
DGH	Desane Group Holdings	EBT	Ebet Limited
DGO	Drummond Gold Ltd	ECM	East Coast Minerals
DGR	D'aguilar Gold	ECU	Eastern Corporation
DGX	Diploma Group Ltd	EDE	Eden Energy Limited
DIA	DIA-B Tech Limited	EDM	Eldore Mining
DJS	David Jones Limited	EDS	Every Day Mine Services Limited
DJW	Djerriwarrh Investments Limited	EEE	Empire Beer Group
DKN	DKN Financial Group	EER	East Energy Resource
DKS	Danks Holdings	EFE	Eastern Iron
DLS	Drillsearch Energy	EFT	Eftel Limited
DMA	Dynasty Metals	EGL	Environmental Group
DMG	Dragon Mountain Gold	EGO	Empire Oil & Gas
DML	Discovery Metals Ltd	EHL	Emeco Holdings
DMM	DMC Mining Limited	EKA	Eureka Energy Ltd
DMX	Dolomatrix Internat.	EKM	Eleckra Mines
DMY	Dromana Estate	ELI	Emerging Leaders Investments Limited
DOM	Dominion Mining	ELK	ELK Petroleum
DON	Diamonex Limited	ELX	Ellex Medical Lasers
DOW	Downer Edi Limited	EMA	Energy And Minerals
DRK	Drake Resources	EMB	Embelton Limited

Code	Company Name	Code	Company Name
EME	Energy Metals Ltd	EVE	Energy Ventures Ltd
EMR	Emerald Oil & Gas NL	EVG	Envirogold Limited
EMS	Eastland Medical	EVM	Enviromission Ltd
EMU	EMU Nickel NL	EVZ	Envirozel Limited
ENB	Eneabba Gas Limited	EWC	Energy World Corpor.
ENE	Energy Developments	EXM	Excalibur Mining
ENG	Engin Limited	EXR	Elixir Petroleum Ltd
ENI	Empowernet International Limited	EXS	Exco Resources Ltd
ENL	Eagle Nickel Ltd	EXT	Extract Resources
ENR	Encounter Resources	EYE	Eagle Eye Metals
ENV	Envestra Limited	EZE	Ezenet Limited
EOL	Energy One Limited	EZL	Euroz Limited
EON	Espreon Limited	FAC	Facilitate Digital
EPD	Empired Ltd	FAN	Fantastic Holdings
EPE	Enterprise Energy	FAS	Fairstar Resources
EPG	European Gas	FAT	FAT Prophets
EPL	Eyecare Partners Ltd	FCL	Futuris Corporation
EPR	Essential Petroleum	FCN	Falcon Minerals Ltd
EPS	Epsilon Energy	FCP	Fcpb Investments Ltd
EQT	Equity Trustees	FDY	Findlay Securities
EQX	Eqitx Limited	FEA	Forest Enterprises
ERA	Energy Resources	FFF	Firstfolio Limited
ERG	ERG Limited	FFI	F.F.I. Holdings
ERH	Eromanga Hydrocarbon	FGE	Forge Group Limited
ERL	Empire Resources	FGI	Flat Glass Ind.
ERM	Emmerson Resources	FGL	Foster's Group
ERN	Erongo Energy	FIS	Fission Energy
ERO	Eromanga Uranium	FLK	Folkestone Limited
ESG	Eastern Star Gas	FLR	Frankland River
ESI	ENV Clean Tech Ltd	FLT	Flight Centre
ESS	Essa Australia	FLX	Felix Resources Ltd.
ESV	Eservglobal Limited	FMG	Fortescue Metals Group
ESW	Emerson Stewart Grp	FML	Focus Minerals Ltd
ETC	Entertainment Media	FMS	Flinders Mines Ltd
ETE	Entek Energy Ltd	FND	Finders Resources
EUG	Eurogold Limited	FNP	Freedom Nutritional

Code	Company Name	Code	Company Name
FNT	Frontier Resources	GCN	Goconnect Limited
FOF	First Opportunity	GCR	Golden Cross
FPG	Forest Place Group	GCS	Global Construction
FPS	Fiducian Portfolio	GDN	Golden State Resources Limited
FRE	Freshtel Holdings	GDR	Goldstar Resources
FRI	Finbar Group Limited	GDY	Geodynamics Limited
FRM	Farm Pride Foods	GED	Golden Deeps Limtied
FRR	Frigrite Limited	GER	Greenearth Energy
FRS	Ferraus Limited	GFE	Global Iron Limited
FSA	FSA Group Limited	GFF	Goodman Fielder.
FSE	Firestone Energy Ltd	GFL	Global Masters
FSN	Fusion Resources Ltd	GGE	Grand Gulf Energy
FTD	Fig Tree Developments	GGG	Greenland Minerals and Energy Ltd
FUL	Fulcrum Equity	GGH	Global Gold Holdings Ltd
FUT	Future Corporation	GGP	Golden Gate Petrol
FWL	Ferrowest Limited	GGX	Gas2grid Limited
FXI	FOX Invest Limited	GGY	Glengarry Resources
FXJ	Fairfax Media Ltd	GIA	Giaconda Limited
FXL	Flexigroup Limited	GIP	Gippsland Limited
FXR	FOX Resources	GIR	Giralia Resources NL
GAA	Genepharm Australasia Limited	GLA	Gladiator Resources
GAP	Gale Pacific Limited	GLB	Globe International
GAU	Great Australian Res	GLE	GLG Corp Ltd
GBA	Grandbridge Limited	GLF	Gulf Resources
GBE	Globe Metals &Mining Limited	GLH	Global Health Ltd
GBG	Gindalbie Metals Ltd	GLI	Goldlink Incomeplus
GBI	Genera Biosystems	GLM	Gulf Mines Limited
GBL	Genesis Biomedical	GLN	Gleneagle Gold
GBM	Greater Bendigo Gold	GLO	Global Approach Limited
GBP	Global Petroleum	GLX	Gulfx Ltd
GBT	Gbst Holdings..	GMD	Genesis Minerals
GBX	GB Energy Limited	GME	GME Resources Ltd
GBZ	GBM Resources Ltd	GMI	Global Mining
GCG	Greencap Limited	GML	Gateway Mining
GCL	Gloucester Coal		

Code	Company Name	Code	Company Name
GMR	Golden Rim Resources	HAW	Hawthorn Resources
GMX	Goldminex Resources	HAZ	Hazelwood Resources
GNI	Global Nickel Investments	HCG	Helicon Group
GNS	Gunns Limited	HDG	Hodges Resources
GNV	Green Invest Ltd	HDN	Haddington Resources
GOA	Gold Aura Limited	HEA	Health Corporation
GOP	Gippsland Offshore	HEG	Hill End Gold
GPB	Global Properties	HEM	Hemisphere Resources
GPN	Greater Pacific Gold	HFA	HFA Holdings Limited
GPP	Greenpower Energy Ltd	HFC	Hawk Resources Ltd
GRB	Gage Roads Brewing	HGN	Halcygen Pharma.
GRK	Green Rock Energy	HHL	Hunter Hall International Limited
GRR	Grange Resources.	HHM	Hampton Hill Mining
GRT	Garratt's Limited	HHV	Hunter Hall Global
GRV	Greenvale Mining NL	HIC	Huntley Investment
GRY	Gryphon Minerals Ltd	HII	Hire Intelligence
GSC	Global Geoscience	HIL	Hills Industries Ltd
GSE	Goldsearch Limited	HIP	Hyperion Flagship
GSF	GSF Corporation Ltd	HIT	Hitech Group Aust.
GTE	Great Western Exp.	HJB	Hamilton James Bruce
GTG	Genetic Technologies	HLD	Headline Group Ltd
GTI	Globe Securities	HLS	Hillcrest Litigation Services Limited
GTX	Golden Tiger Mining	HLX	Helix Resources
GUD	G.U.D. Holdings	HMC	Hydromet Corp. Ltd
GUL	Gullewa Limited	HNR	Hannans Reward Ltd
GUN	Gunson Resources	HOM	Homeloans Limited
GWR	Golden West Resource	HRL	HOT Rock Limited
GWT	GWA International	HRR	Heron Resources
GXL	Greencross Limited	HSN	Hansen Technologies
GXY	Galaxy Resources	HSP	Healthscope Limited
GYN	Graynic Metals Ltd	HST	Hastie Group Limited
GZL	Gazal Corporation	HTE	Hitec Energy Limited
HAO	Haoma Mining NL	HTI	Hydrotech International Limited
HAP	HFA Accelerator Plus	HTX	Healthlinx Limited
HAV	Havilah Resources NL	HVN	Harvey Norman

Code	Company Name	Code	Company Name
HWI	Housewares International	IMI	IM Medical Ltd
HXL	Hexima Limited	IMP	Imperial Corp Ltd
HZL	Healthzone Limited	IMU	Imugene Limited
HZN	Horizon Oil Limited	INL	Intec Ltd
IAG	Insurance Australia	INP	Innamincka Petroleum
IAS	International Allsports	INT	Intermoco Limited
IAT	Iatia Limited	IOH	Iron Ore Holdings
IAW	Integrated Legal	IPA	Indigo Pacific Cap.
IBA	IBA Health Group Ltd	IPD	Impedimed Limited
IBC	Ironbark Capital Ltd	IPE	ING Private Equity
IBG	Ironbark Gold	IPN	Independent Prac.
ICC	IC2 Global Limited	IPR	Ipernica Limited
ICP	Icash Payment System	IPT	Impact Minerals
ICS	Icsglobal Limited	IPX	Intrapower Limited
ICV	Incitive Limited	IRC	Intermin Resources
IDL	Industrea Limited	IRD	Iron Road Ltd
IDM	Industrial Minerals	IRI	Integrated Research
IDO	Indo Mines Limited	IRL	India Resources
IDT	IDT Australia Ltd	IRM	Iron Mountain
IEQ	International Equities	ISS	ISS Group Limited
IFC	IFC Capital Limited	ITC	Impress Energy Ltd
IFE	Ironclad Mining	ITD	ITL Limited
IFL	Ioof Holdings Ltd	ITE	I.T.& E Limited
IFM	Infomedia Ltd	ITS	Interstaff Recruitment
IGC	International Gold..	ITT	Intermet Resources
IGG	Ingena Group Ltd	ITX	ITX Group Limited
IGO	Independence Group	IUL	Imagine Un Limited
IGR	Integra Mining Ltd.	IVT	Inventis Limited
IGX	Igdx Holdings Ltd	IXR	IMX Resources NL
IIG	Integrated Investment Group Limited	JAG	Jaguar Minerals
III	Icon Resources Ltd	JAK	Jackson Minerals Ltd
IIN	Iinet Limited	JAL	Jameson Resources
IMA	Image Resources NL	JAT	Jatoil Limited
IMD	Imdex Limited	JBH	JB Hi-Fi Limited
IMF	IMF (Australia) Ltd	JET	Jetset Travelworld

Code	Company Name	Code	Company Name
JGL	Jackgreen Limited	KZL	Kagara Ltd
JMB	Jumbuck Entertainment	LAS	Lasseters Corp.
JML	Jabiru Metals Ltd	LAT	Latin Gold Limited
JMS	Jupiter Mines	LAU	Lindsay Australia
JPR	Jupiter Energy	LBL	Laserbond Limited
JRL	Jindalee Resources	LBT	Labtech Systems Ltd
JRV	Jervois Mining	LBY	Liberty Resource Ltd
JUT	Jutt Holdings	LCE	London City Equities Ltd
JVG	JV Global Limited	LCM	Logicamms Limited
JYC	Joyce Corporation	LCT	Living Cell Tech.
KAL	Kalgoorlie-Boulder	LEI	Leighton Holdings
KAM	K2 Asset Management Holdings	LFE	Life Therapeutics
KAR	Karoon Gas Australia	LGD	Legend Corporation
KAS	Kasbah Resources	LGO	Longreach Oil Ltd.
KAT	Katana Capital	LIC	Lifestyle Communities Limited
KBC	Keybridge Capital	LIN	Lindian Resources
KCN	Kingsgate Consolidated Limited	LIO	Lion Energy Limited
KEN	Kuth Energy Limited	LKE	Lake Resources
KEY	KEY Petroleum	LKO	Lakes Oil NL
KIK	Kairiki Energy Ltd	LLC	Lend Lease Corp.
KIS	King Island	LMC	Lemarne Corporation
KKT	Konekt Limited	LMG	Latrobe Magnesium
KLM	KLM Group Ltd	LML	Lincoln Minerals
KME	KIP Mcgrath Education Centres Limited	LMW	Landmark White Ltd
KML	Kangaroo Metals	LNC	Linc Energy Ltd
KMN	Kings Minerals NL	LNG	Liquefied Natural
KOR	Korab Resources	LOD	Lodestone Energy Limited
KOV	Korvest Ltd	LRG	Longreach Group.
KRB	Krucible Metals Ltd	LRL	Leyshon Resources
KRM	Kingsrose Mining Ltd	LSA	Lachlan Star Ltd
KRS	Kresta Holdings	LSR	Lodestar Minerals
KSC	K & S Corporation	LTR	Liontown Resources
KSX	Karmelsonix Ltd	LUM	Lumacom Limited
KTE	K2 Energy Ltd	LWB	Little World Beverages Limited
KYC	Keycorp Limited	LYC	Lynas Corporation

Code	Company Name	Code	Company Name
LYL	Lycopodium Limited	MEU	Marmota Energy Ltd
MAB	Mamba Minerals	MFF	Magellan Flagship
MAE	Marion Energy	MFG	Magellan Financial Group Ltd
MAH	Macmahon Holdings	MFI	Mariner Financial
MAK	Minemakers Limited	MGK	MIL Resources
MAL	Matilda Minerals Ltd	MGO	Marengo Mining
MAN	Magna Mining NL	MGX	Mount Gibson Iron
MAQ	Macquarie Telecom Gp	MGZ	Medigard Limited
MAR	Malachite Resources	MHL	Monitor Energy Ltd
MAU	Magnetic Resources	MHM	Macquarie Harbour
MBA	Mobileactive Limited	MIK	Mikoh Corporation
MBD	Marbletrend Group	MIN	Mineral Resources.
MBI	Mobi Limited	MIR	Mirrabooka Invest.
MBN	Mirabela Nickel Ltd	MKY	MKY Corporation Ltd
MBP	Metabolic	MLI	Mintails Limited
MBT	Mission Biofuels	MLM	Metallica Minerals
MCC	Macarthur Coal	MLS	Metals Australia
MCH	Murchison Holdings	MLT	Milton Corporation
MCK	Macarthurcook Ltd	MLX	Metals X Limited
MCL	M2M Corporation	MMA	MMC Contrarian Ltd
MCO	Morning Star Gold NL	MMB	Magma Metals Limited
MCP	Mcpherson's Ltd	MML	Medusa Mining Ltd
MCR	Mincor Resources NL	MMN	Macmin Silver Ltd
MCU	Mitchell Communications Group	MMR	MEC Resources
MDA	Modena Resources Ltd	MMS	Mcmillan Shakespeare
MDL	Mineral Deposits	MMX	Murchison Metals Ltd
MDS	Midas Resources	MMY	Mercury Mobility Ltd
MDV	Medivac Limited	MMZ	Mooter Media Limited
MDX	Mindax Limited	MNC	Metminco Limited
MEE	Metex Resources	MND	Monadelphous Group
MEG	MCM Entertainment Gr	MNF	MY Net Fone Limited
MEI	Meteoric Resources	MNL	Manaccom Corp Ltd
MEL	Metgasco Limited	MNM	Mantle Mining Corp.
MEO	MEO Australia Ltd	MNW	Mint Wireless
MEP	Minotaur Exploration	MNY	Money3 Corporation

Code	Company Name	Code	Company Name
MOC	Mortgage Choice Ltd	MWR	MGM Wireless Limited
MOG	Moby Oil & Gas Ltd	MWS	MDS Financial Group
MOL	Moly Mines Limited	MXI	Maxitrans Industries
MOS	Mosaic Oil NL	MXR	Maximus Resources
MOX	Monax Mining Limited	MYG	Mutiny Gold Limited
MPA	Marine Produce Aust.	MZM	Montezuma Mining Co.
MPD	Millepede International Limited	NAD	North Australian Ltd
MPI	Mark Sensing	NAE	New Age Exploration
MPJ	Mining Projects	NAL	Norwood Abbey Ltd
MPO	Molopo Australia Ltd	NAN	Nanosonics Limited
MRM	Mermaid Marine	NAV	Navigator Resources
MRN	Macquarie Radio	NBL	Noni B Limited
MRU	Mantra Resources	NCI	National Can Industries Ltd
MRX	Matrix Metals	NCK	Nick Scali Limited
MRY	Monteray Group	NCM	Newcrest Mining
MSB	Mesoblast Limited	NDL	Neurodiscovery
MSC	Minerals Corporation	NEC	Northern Energy Corp
MSF	Maryborough Sugar	NEO	Nuenco NL
MSL	MAC Services (The)	NFL	Natural Fuel Limited
MSN	Mineral Sands	NGF	Norton Gold Fields
MTB	Mount Burgess Mining	NGM	NGM Resources Ltd
MTD	Metroland Australia	NGY	Nuenergy Capital Ltd
MTH	Mithril Resources	NHD	900 Degrees Limited
MTI	Montec International	NHF	NIB Holdings Limited
MTN	Marathon Resources	NHH	Newhaven Hotels Ltd
MTU	M2 Telecommunication	NHR	National Hire Group
MTY	Medical Therapies	NIO	Nickelore Ltd
MUM	Mount Magnet South	NIP	Niplats Australia
MUN	Mundo Minerals	NLB	Nullarbor Holdings
MUR	Murchison United NL	NLG	National Leisure
MUT	Multi Channel	NLX	Nylex Limited
MVH	Medic Vision Limited	NME	Nex Metals Exploration Limited
MVP	Medical Developments	NMG	Noble Mineral Res
MWE	Mawson West Ltd	NMI	Northern Mining
MWN	Midwinter Resources NL	NMR	Nimrodel Resources

Code	Company Name	Code	Company Name
NMS	Neptune Marine	OKJ	Oakajee Corp Ltd
NOA	Noah Resources NL	OKN	Oakton Limited
NOD	Nomad Building	OKU	Oklo Uranium Limited
NQM	North Queensland	OLE	Olea Australis
NRL	Newland Resources	OLH	Oldfields Holdings
NRT	Novogen Limited	OLY	Olympia Resources
NRU	Newera Uranium	OMI	Occupational & Med.
NSL	NSL Health Limited	ONC	Oncard International
NSP	Nusep Ltd	ONT	1300 Smiles Limited
NST	Northern Star	ORC	Orchid Capital
NSX	NSX Limited	ORD	ORD River Resources
NTC	Netcomm Limited.	ORE	Orocobre Limited
NTU	Northern Uranium	ORG	Origin Energy
NUP	Nupower Resources	ORH	Orient Resource
NVT	Navitas Limited	ORO	Oroya Mining Limited
NWE	Norwest Energy NL	ORP	Oropa Limited
NWH	NRW Holdings Limited	OST	Onesteel Limited
NWR	Northwest Resources	OVR	Overland Resources
NWT	Newsat Limited	OZG	Ozgrowth Limited
NXS	Nexus Energy Limited	PAA	Pharmaust Limited
OAK	Oaks Hotels & Resort	PAB	Patrys Limited
OBJ	OBJ Limited	PAG	Primeag Australia
OBL	OIL Basins Limited	PAN	Panoramic Resources
OCE	Ocean Capital	PAX	Panax Geothermal Ltd
OCL	Objective Corp	PAY	Payce Consolidated
ODG	Odyssey Gaming	PBA	Peoplebank Australia
ODN	Odin Energy Limited	PBD	Port Bouvard Limited
ODY	Odyssey Energy	PBG	Pacific Brands
OEC	Orbital Corp Limited	PBP	Probiotec Limited
OEL	Otto Energy Limited	PBT	Prana Biotechnology
OEQ	Orion Equities	PCC	Probiomics Limited
OEX	Oilex Ltd	PCL	Pancontinental Oil
OFG	Over Fifty Group	PCP	Paramount Mining
OIL	Optiscan Imaging	PDM	Paradigm Metals Ltd
OIP	Orion Petroleum Ltd	PDN	Paladin Energy Ltd

Code	Company Name	Code	Company Name
PDO	Paladio Group	PMP	PMP Limited
PDZ	Prairie Downs Metals	PMV	Premier Investments
PEH	Pacific Environment	PMX	Palamedia Limited
PEK	Peak Resources	PNN	Pepinnini Minerals
PEL	Pelican Resources	PNW	Pacific Star Network
PEM	Perilya Limited	PNX	Phoenix Copper Ltd
PEN	Peninsula Minerals	POL	Polaris Metals NL
PEO	People Telecom	POS	Poseidon Nick Ltd
PES	Pure Energy	PPC	Peet Limited
PET	Peters Macgregor Investments Limited	PPD	PAN Palladium Ltd
PEV	Pacific Enviromin Limited	PPG	PRO-Pac Packaging
PEX	Peel Exploration	PPI	Pelorus Property.
PFG	Prime Financial	PPK	PPK Group Limited
PFL	Patties Foods Ltd	PPN	Planet Platinum Ltd
PFM	Pacific Mining Ltd	PPP	PAN Pacific Petrol.
PGA	Photon Group Ltd	PPS	Praemium Limited
PGC	Paragon Care Limited	PPT	Perpetual Limited
PGL	Progen Pharmaceuticals Limited	PPX	Paperlinx Limited
PGM	Platina Resources	PPY	Papyrus Australia
PHG	Pulse Health Limited	PRO	Prophecy International Holdings
PHI	Phileo Australia	PRR	Prima Biomed Ltd
PHK	Phoslock Water	PRT	Prime Media Group Ltd
PHL	Pearl Healthcare	PRU	Perseus Mining Ltd
PHW	Prince Hill Wines	PRV	Premium Investors
PIE	Pienetworks Limited	PRW	Proto Resources
PIM	Prime Minerals	PRY	Primary Health Care
PIO	Pioneer Nickel Ltd	PRZ	Primary Resources
PLA	Platinum Australia	PSF	Pacific Ore Ltd
PLB	Plan B Group Hld	PSH	Penrice Soda
PLD	Portland Orthopaed.	PSP	Prosperity Resources
PLT	Polartechnics Ltd	PST	Pearlstreet Limited
PLV	Pluton Resources	PTB	PTB Group Limited
PMC	Platinum Capital Ltd	PTM	Platinum Asset
PME	PRO Medicus Limited	PTO	Photo-Me Australia
PMH	Pacmag Metals Ltd	PTR	Petratherm Ltd

Code	Company Name	Code	Company Name
PTS	Platsearch NL	RCI	Rocklands Rich. Ltd
PUN	Pegasus Metals	RCM	Reclaim Industries
PWK	Pipe Networks	RCO	Royalco Resources
PWR	Powerlan Limited	RCR	RCR Tomlinson
PWW	Power Resources Ltd	RDF	Redflex Holdings
PXL	Proteome Systems Ltd	RDM	RED Metal Limited
PXR	Palace Resources	RDR	Reed Resources Ltd
PYC	Phylogica Limited	RDS	Redstone Resources
QAN	Qantas Airways	REA	Realestate.Com.Au
QED	QED Occtech Limited	RED	RED 5 Limited
QFX	Quickflix Limited	REF	Reverse Corp Limited
QGC	Queensland Gas	REH	Reece Australia Ltd.
QHL	Quickstep Holdings	REO	Reco Financial
QMG	Quay Magnesium Ltd	RER	Regal Resources
QML	Qmastor Limited	REX	Regional Express
QOL	Queensland Ores	REY	REY Resources Ltd
QRS	Qrsciences Holdings	RFE	RED Fork Energy
QRX	Qrxpharma Ltd	RFG	Retail Food Group
QSS	Questus Limited	RFL	Rubik Financial Ltd.
QST	Quest Investments	RFT	Rectifier Technologies Limited
QTI	QLD Trustees Invest	RGP	Refresh Group
QTM	Quantum Energy.	RHC	Ramsay Health Care
QUE	Queste Communication	RHD	Ross Human Direction
QUR	Quantum Resources	RHG	RHG Limited
QXQ	Q Limited	RHI	RED Hill Iron
RAU	Republic Gold Ltd	RHM	Richmond Mining
RAW	Rawson Resources	RHT	Resonance Health
RBH	Real Brand Holdings	RIA	Rialto Energy
RBM	Redbank Mines	RIC	Ridley Corporation
RBR	Rubicon Resources	RIV	Riversdale Mining
RBX	Resource Base	RLA	Redisland Australia
RBY	Rockeby Biomed Ltd	RLC	Reedy Lagoon Corporation Limited
RCA	RAW Capital Partners	RMC	Rimcapital Limited
RCG	RCG Corporation Ltd	RMG	RMG Limited
RCH	Richfield Group	RMI	Resource Mining Corp

Code	Company Name	Code	Company Name
RML	Rusina Mining NL	SBP	Solbec Pharmaceuticals Limited
RMP	RED Emperor Resource	SBR	Sabre Resources
RMS	Ramelius Resources	SBS	SUB-Sahara Resources
RMT	RMA Energy Limited	SCB	Scarborough Equities
RNC	RUN Corp Limited	SCC	Scott Corporation.
RND	Rand Mining NL	SCD	Scantech Limited
RNG	Range River Gold Ltd	SCV	SCV Group Limited
RNI	Resource And Invest.	SDG	Sunland Group Ltd
ROL	Robust Resources	SDI	SDI Limited
ROY	Royal Resources	SDL	Sundance Resources
RPC	Repcol Limited	SDM	Sedgman Limited
RPM	Roma Petroleum NL	SEA	Sundance Energy
RPX	RP Data Ltd	SEG	Segue Resources
RRL	Regis Resources	SEK	Seek Limited
RRS	Range Resources Ltd	SEN	Senetas Corporation
RSG	Resolute Mining	SEV	Seven Network
RSN	Renison Consolidated	SEY	Sunset Energy Ltd
RTL	RTL Corporation Ltd	SFC	Schaffer Corp. Ltd.
RUB	Rubicor Group	SFP	Safety Medical
RUL	Runge Limited	SFR	Sandfire Resources
RUM	RUM Jungle Uranium	SGH	Slater & Gordon
RUR	Ruralaus Investments	SGL	Sydney Gas Ltd
RVM	Revere Mining	SGM	Sims Group Limited.
RVR	RED River Resources	SGY	Solimar Energy Ltd
RXL	ROX Resources	SGZ	Scotgold Resources
RXM	REX Minerals Limited	SHC	Sunshine Heart
SAE	Salinas Energy	SHE	Stonehenge Metals
SAI	SAI Global Limited	SHG	Sunshine Gas Limited
SAP	Sabina Corporation	SHL	Sonic Healthcare
SAR	Saracen Mineral	SHR	Shearer (John) Hldgs
SAU	Southern Gold	SHV	Select Harvests
SBI	Sterling Biofuels	SHX	Shield Mining
SBL	Signature Metals Ltd	SIM	Scimitar Resources
SBM	ST Barbara Limited	SIU	Sirius Corp Ltd
SBN	SUN Biomedical Ltd	SIV	Silver Chef Limited

Code	Company Name	Code	Company Name
SKE	Skilled Group Ltd	SRV	Servcorp Limited
SKS	Stokes (Australasia)	SRX	Sirtex Medical
SKY	Skydome Hold. Ltd.	SRZ	Stellar Resources
SLA	Solagran Limited	SSC	Sultan Corporation
SLM	Salmat Limited	SSI	Sino Strategic Intl
SLR	Silver Lake Resource	SSM	Service Stream
SLV	Sylvania Resources	SSN	Samson Oil & Gas Ltd
SLX	Silex Systems	STB	South Boulder Mines
SMA	Smarttrans Holdings	STE	Stratatel Limited
SMD	Syndicated Metals	STG	Staging Connections
SML	Synergy Metals Ltd	STI	Stirling Products
SMM	Summit Resources	STP	Stericorp Limited
SMX	SMS Management.	STS	Structural Systems
SMZ	Stirling Minerals	STU	Stuart Petroleum Ltd
SND	Saunders Intl Ltd	STX	Strike Oil Limited
SNL	Supply Network	SUL	Super Cheap Auto Grp
SNO	Snowball Group	SUR	SUN Resources NL
SNU	Southern Uranium	SVC	Shell Vill Resorts
SNV	Sinovus Mining Ltd	SVL	Silver Mines Limited
SOI	Soilsub Technologies	SVM	Sovereign Metals
SOM	Somnomed Limited	SVN	Senevens Intl Ltd
SOO	Solco Ltd	SVS	Sunvest Corporation
SPD	Strategic Pooled	SWG	Swish Group Limited
SPH	Sphere Investments	SWK	Swick Mining
SPI	Spitfire Resources	SWN	Silver Swan Group
SPL	Starpharma Holdings	SXE	STH Cross Electrical Engineering
SPQ	Superior Resources	SXG	Southerncross Gold
SPT	Spotless Group Ltd	SXP	Sapex Limited
SRA	Strathfield Group	SYG	Synergy Equities
SRH	Saferoads Holdings	SYM	Symex Holdings
SRI	Sipa Resources Ltd	SYN	ST Synergy Limited
SRK	Strike Resources	SYP	Style Limited
SRL	Straits Resources	SYR	Syrah Resources
SRM	Sierra Mining	TAG	TAG Pacific Limited
SRR	Shaw River Resources	TAH	Tabcorp Holdings Ltd

Code	Company Name	Code	Company Name
TAM	Tanami Gold NL	TOL	Toll Holdings Ltd
TAS	Tasman Resources NL	TOX	TOX Free Solutions
TBR	Tribune Resources NL	TPC	TEL.Pacific Limited
TCL	Transurban Group stapled	TPI	Transpacific Industries Group Ltd
TCN	Techniche Limited.	TPL	TPL Corporation Ltd
TCO	Transmetro Corp. Ltd	TPX	Tasmanian Perpetual
TCQ	Trinity Group stapled	TQH	3Q Holdings Limited
TDI	Tidewater Investment	TRF	Trafford Resources
TDO	3D Oil Limited	TRG	Treasury Group
TEO	Telesso Tech Ltd	TRH	Transit Holdings
TEU	TOP End Uranium Ltd	TRM	Truscott Mining Corp
TEX	Target Energy	TRO	TRI Origin Minerals
TEY	Torrens Energy	TRS	THE Reject Shop
TFC	TFS Corporation Ltd	TRY	Troy Resources NL
TFS	Tranzact Financial Services Limited	TSE	Transfield Services
TGF	Tianshan Goldfields	TSF	Total Staffing Solutions
TGG	Templeton Global	TSH	TSV Holdings Limited
TGP	Trafalgar Corporate stapled	TSV	Transerv Australia
TGR	Tassal Group Limited	TTA	TTA Holdings Ltd
TGS	Tiger Resources	TTH	Tooth & Company
TGX	Tasman Goldflds Ltd	TTI	Traffic Technologies
THO	Thomas & Coffey	TTR	Tectonic Resources
THR	Thor Mining Plc cdi	TTS	Tatts Group Ltd
TIS	Tissue Therapies	TTV	TWO Way Limited
TJN	Trojan Equity	TTY	Territory Resources
TKG	Takoradi Limited	TUC	Territory Uranium
TKL	Traka Resources	TVN	TVN Corporation Ltd
TLM	Talisman Mining	TWD	Tamawood Limited
TLS	Telstra Corporation.	TWO	Talent2 International Limited
TLZ	Telezon Limited	TWT	TWT Group Limited
TMX	Terrain Minerals	TZL	TZ Limited
TNC	Transol Corporation	UCL	Union Resources Ltd
TNG	TNG Limited	UCM	Uscom Limited
TNL	Tolhurst Group Ltd	UCW	Undercoverwear Ltd
TOE	Toro Energy Limited	UEQ	Uranium Equities

Code	Company Name	Code	Company Name
UGL	United Group Limited	WAA	WAM Active Limited
UKL	Uranium King Limited	WAB	Wallace Absolute
UMC	United Minerals	WAG	WAG Limited
UNI	Unilife Medical Solutions Limited	WAL	Wavenet Internation.
UNO	Uranio Limited	WAM	WAM Capital Limited
UNX	Uranex NL	WAN	West Australian News
UOG	Uranium Oil And Gas	WAS	Wasabi Energy Ltd.
URA	Uran Limited	WAT	Waterco Limited
URL	Universal Resources	WBA	Webster Ltd
URM	Uramet Minerals	WCB	Warrnambool Cheese
USA	Uraniumsa Limited	WCL	Westside Corporation
UTO	U308 Limited	WCN	White Cliff Nickel
UUL	United Uranium	WCP	WCP Resources Ltd
UXA	Uranium Exploration	WCU	White Canyon Uranium
UXC	UXC Limited	WDR	Western Desert Res.
VBA	Virgin Blue Holdings	WDS	WDS Limited
VCN	Vulcan Resources	WEB	Webjet Limited
VCR	Ventracor Limited	WEC	White Energy Company
VEC	Vector Resources Ltd	WES	Wesfarmers Limited
VGH	Vision Group Hldgs	WEZ	Westonia Mines Ltd
VGP	Verticon Group Ltd.	WFL	Willmott Forests
VHL	Virax Holdings	WGP	Westralian Gas And P
VIE	Viento Group Limited	WGR	Westgold Resources
VIL	Verus Investments	WHC	Whitehaven Coal
VLA	Viralytics Limited	WHE	Wildhorse Energy
VMG	VDM Group Limited	WHG	WHK Group Limited
VML	Vital Metals Limited	WHN	WHL Energy Limited
VMS	Venture Minerals	WIG	Wilson Htm Invest.
VMT	Vmoto Limited	WIL	Wilson Investment
VNS	Venus Resources	WKL	Western Kingfish
VPE	Victoria Petroleum	WKR	Windy Knob Resources
VRL	Village Roadshow Ltd	WLF	Wolf Minerals
VTG	Vita Group Ltd	WLL	Wellcom Group Ltd
VTP	VAN Eyk Three Pillar	WME	West Australian Met.
VTX	Vortex Pipes Ltd	WMT	Western Metals

Code	Company Name
WNS	World.Net Services
WOR	Worleyparsons Ltd
WOW	Woolworths Limited
WPG	Western Plains Res
WRK	Warwick Resources
WRL	Washington Resources
WRR	World Reach Ltd
WSA	Western Areas NL
WSY	Webspy Limited
WTF	Wotif.Com Holdings
WTN	Western Uranium
WTP	Watpac Limited
WVL	Windimurra Vanadium
WWA	Wridgways Australia
WWI	West Wits Mining Ltd
WWM	Wentworth Hldgs Ltd
WWW	Whinnen Resources
WYL	Wattyl Limited
XCD	Xceed Capital Ltd.
XEN/P	Xenolith Res Ltd
XRF	XRF Scientific
XTE	Xtek Limited.
YRR	Yellow Rock
YTC	YTC Resources
ZGL	Zicom Group Limited
ZGM	Zamia Gold Mines
ZNC	Zinc Co Australia
ZYL	Zylotech Limited

Appendix 2: Alphabetical Listing of Variables

Variable	Measure
ASX Adopter	Dichotomous variable, coded one (1) if the company has adopted all three membership guidelines included in the ASX remuneration committee recommendations regarding committee composition, and zero (0) otherwise.
Agency Score	Composite score measuring the level of agency costs experienced by the company, maximum score of 7.
Agency Score * ASX Adopter	Interaction variable, Agency Score * ASX Adopter.
Asset Turnover	Operating revenue divided by average total assets.
Big 4 Auditor	Dichotomous variable, coded one (1) if the company has engaged a Big 4 audit firm, and zero (0) otherwise.
Board Independence	The number of independent directors appointed to the board divided by the total number of directors appointed to the board.
Board Size	Number of directors appointed to the Board.
Cash Remuneration	Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives.
Cash Remuneration$_{t-1}$	Natural log of salary, superannuation, fringe benefit, and cash bonus payments to the top five ranked executives in the prior year.
CEO Entrenchment	Dichotomous variable, coded one (1) if the CEO of the company has changed in the two years prior to the 2008 financial report and zero (0) otherwise.
Δ Cash Remuneration	On year change in the natural log of cash remuneration for the top five ranked executives between 2007 and 2008.
Company Age	The number of years since the company listed on the ASX.
Company Size	Natural log of total assets.
Complexity	Number of industry and geographical segments in which the company operates.
Free Cash Flow	Difference between the gross cash flow from operations less gross investment. The variable is winsorised at 1 per cent
Governance Quality	Score determined by adding one point for adoption of ASX governance recommendations included in governance strength index.

Variable	Measure
Growth	Book value of equity divided by market value of equity, winsorised at 1%.
Independent Board Chair	Dummy variable coded one (1) if the chairperson is an independent director at 30 June 2008, and zero (0) otherwise
Industry	Indicator variable for Global Industry Classification Standard (GICS) industry sector
Insider Shareholding	Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties and their related parties.
Institutional Shareholding	Percentage shareholding by institutional entities identified from the top twenty shareholders disclosed in the annual report
Leverage	Total assets divided by total liabilities, winsorised at 1%.
Ownership Structure	Natural log of the percentage of issued ordinary equity owned by directors, management, large individual shareholders deemed to be insiders and their related parties and their related parties.
Remuneration Committee	Dichotomous variable, coded one (1) if the company has formed a remuneration committee, and zero (0) otherwise.
Return on Assets (ROA)	Earnings from continuing operations divided by total average assets.
Risk	The company's five year average beta relative to the MSCI emerging markets index.
ROA * ASX Adopter	ROA*ASX Adopter
Separate Board Chair	Dummy variable coded one (1) if the roles of the CEO and Chair are performed by different people, and zero (0) otherwise.
Shareholder Dissent	The proportion of shareholder votes cast against the 2008 annual remuneration report as a percentage of the total votes cast.
Total Shareholder Return (TSR)	Dividend adjusted annualised percentage change in stock price
ΔROA	The change in return on assets from 2007 to 2008.
ΔROA*ASX Adopter	ΔROA * ASX Adopter

Appendix 3: Summary of Findings from Hypotheses Testing

Hypothesis	Main Findings
Remuneration Committee Formation and Composition:	
H1a: Companies with widely dispersed shareholding adopt the ASX remuneration committee recommendations.	• Committee Formation (N = 1,304): No support for full sample. • Committee Composition (N = 718): No support for committee composition sub-sample. • Large Companies: Committee Formation (N = 471) – No support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – No support is found. Committee Composition (N = 576) – No support is found. • Small Companies: Committee Formation (N = 392) - No support is found. Committee Composition (N = 130) –Support is found.
H1b: Companies with greater management share ownership adopt the ASX remuneration committee recommendations.	• Committee Formation (N = 1,304): Supported for full sample. • Committee Composition (N = 718): No support for composition sub- sample. • Large Companies: Committee Formation (N = 471) –Support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – Support is found. Committee Composition (N = 576) – No support is found. • Small Companies (N = 392): Committee Formation - No support is found. Committee Composition (N = 130) –No support is found.

Hypothesis	Main Findings
Remuneration Committee Formation and Composition (cont.):	
H1c: Companies with higher institutional shareholding adopt the ASX remuneration committee recommendations.	• Committee Formation (N = 1,304): No support for full sample. • Committee Composition (N = 718): No support for composition sub- sample. • Large Companies: Committee Formation (N = 471) – Support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) –Support is found. Committee Composition (N = 576) – No support is found. Small Companies (N = 392): Committee Formation - No support is found. Committee Composition (N = 130) –No support is found.
H2: Companies evidencing CEO entrenchment adopt the ASX remuneration committee recommendations.	• Committee Formation (N = 1,304): No support for full sample. • Committee Composition (N = 718): No support for composition sub- sample. • Large Companies: Committee Formation (N = 471) – No support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – No support is found. Committee Composition (N = 576) – No support is found. • Small Companies: Committee Formation (N = 392) - No support is found. Committee Composition (N = 130) –No support is found.

Hypothesis	Main Findings
Remuneration Committee Formation and Composition (cont.)	
H3: Companies with greater complexity adopt ASX remuneration committee recommendations.	• Committee Formation (N = 1,304): No support for full sample. • Committee Composition (N = 718): No support for composition sub- sample. • Large Companies: Committee Formation (N = 471) – No support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – No support is found. Committee Composition (N = 576) – No support is found. • Small Companies (N = 392): Committee Formation - No support is found. Committee Composition (N= 130) –No support is found.
H4a: High growth companies adopt the ASX remuneration committee recommendations.	• Committee Formation (N = 1,304): No support for full sample. • Committee Composition (N = 718): No support for composition sub- sample. • Large Companies: Committee Formation (N = 471) – No support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – No support is found. Committee Composition (N = 576) – No support is found. • Small Companies: Committee Formation (N = 392) - No support is found. Committee Composition (N = 130) –No support is found.

Hypothesis	Main Findings
Remuneration Committee Formation and Composition (cont.)	
H4b: Companies with greater free cash flows adopt the ASX remuneration committee recommendations	• Committee Formation (N = 1,304): No support for full sample. • Committee Composition (N = 718): No support composition sub- sample. • Large Companies: Committee Formation (N = 471) – No support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – No support is found. Committee Composition (N = 576) – No support is found. • Small Companies: Committee Formation (N = 392) - No support is found. Committee Composition (N = 130) – No support is found.
H4c: Companies with lower asset turnover adopt the ASX remuneration committee recommendations.	• Committee Formation (N = 1,304): No support for full sample. • Committee Composition (N = 718): No support for composition sub- sample. • Large Companies: Committee Formation (N = 471) – No support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – No support is found. Committee Composition (N = 576) – No support is found. • Small Companies: Committee Formation (N = 392) - Support is found. Committee Composition (N = 130) –No support is found.

Hypothesis	Main Findings
Remuneration Committee Formation and Composition (cont.)	
H5a: Companies with larger board size adopt the ASX remuneration committee recommendations.	• Committee Formation (N = 1,304): No support for full sample. • Committee Composition (N = 718): Support for composition sub- sample. • Large Companies: Committee Formation (N = 471) –Support is found. Committee Composition (N = 368) – No support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – No support is found. Committee Composition (N = 576) – Support is found. • Small Companies: Committee Formation (N = 392) - No support is found. Committee Composition (N = 130) –Support is found.
H5b: Companies with a higher proportion of independent directors adopt the ASX remuneration committee composition recommendations.	• Committee Formation – N/A. • Committee Composition (N = 718): Support for composition sub- sample. • Large Companies: Committee Formation (N = 471) – N/A. Committee Composition (N = 368) – Support is found. • Small – Mid Companies: Committee Formation (N = 1,158) – N/A. Committee Composition (N = 576) –Support is found. • Small Companies: Committee Formation (N = 392) – N/A. Committee Composition (N = 130) – Support is found.

Hypothesis	Main Findings
Remuneration Committee Efficacy:	
H6a: Adoption of the ASX remuneration committee recommendations is associated with the level of cash remuneration awarded to key executives.	• Support for full sample (N = 1,067). • Support for companies with positive return on assets, however no support for companies with negative remuneration on assets. • Support for companies identified as paying excessive remuneration.
H6b: Adoption of the ASX remuneration committee recommendations is associated with stronger pay for performance sensitivity in remuneration awarded to key executives.	• No support for full sample (N = 1,067). • No support for companies with positive or negative return on assets. • Marginal support for companies identified as paying excessive remuneration.
H7: Companies adopting the ASX remuneration committee recommendations receive less shareholder dissent on the annual remuneration report.	• No support for full sample (N = 1,067). • Limited support for companies identified as paying excessive remuneration.

Appendix 4: Descriptive Statistics for ASX 300 Sub-Sample

Committee Formation:	**Full Sample**		**ASX 300**	
	%	*N*	*%*	*N*
• No Remuneration Committee	46.83	701	3.89	6
• Remuneration Committee Formed	53.17	796	96.11	148
Committee Composition:	**Full Sample**		**ASX 300**	
	%	*N*	*%*	*N*
• Majority of members appointed are independent	65.70	523	83.77	129
• ASX Adopter Remuneration Committee	42.46	338	66.88	103
• Non-Adopter Remuneration Committee	57.54	458	33.12	51

Appendix 5: Descriptive Statistics for Positive & Negative Operating Performance Companies

	Positive ROA Companies					Negative ROA Companies				
	N			%		N			Mean	
No Remuneration Committee	134			24.1		566			60.3	
Remuneration Committee	422			75.9		373			39.7	
ASX Adopter	223			40.1		115			12.2	
	N	**Min**	**Mean**	**Std Deviation**	**Max**	**N**	**Min**	**Mean**	**Std Deviation**	**Max**
Shareholder Dissent	530	0.00	0.07	0.11	0.69	918	0.00	0.05	0.10	0.78
Return on Assets	556	0.00	0.13	0.52	9.02	938	-37.20	-0.54	1.76	-0.00
Change ROA	556	-0.98	0.14	0.88	12.99	937	-36.91	-0.22	1.90	20.46
Total Cash Remuneration	556	0.00	1,114,875	1871312	24,054,907	939	0.00	262,661	323224	3,440,000
Insider Shareholding	503	0.00	22.20	100.00	22.21	802	0.00	18.38	17.25	100.00
Institutional shareholding	556	0.00	25.77	88.00	22.32	939	0.00	13.61	16.40	93.00
Company Size	556	13.13	18.70	1.91	24.36	939	11.76	16.29	1.38	23.74
Board Size	556	3.00	5.31	1.72	13.00	939	3.00	4.20	1.15	9.00
Board Independence	556	0.00	0.54	0.24	1.00	939	0.00	0.44	0.28	1.00
Growth	556	-3.03	2.14	2.48	18.76	939	-3.03	2.89	3.61	18.76
Risk	552	-2.18	0.76	0.78	3.64	929	-51.70	1.48	17.23	522.08